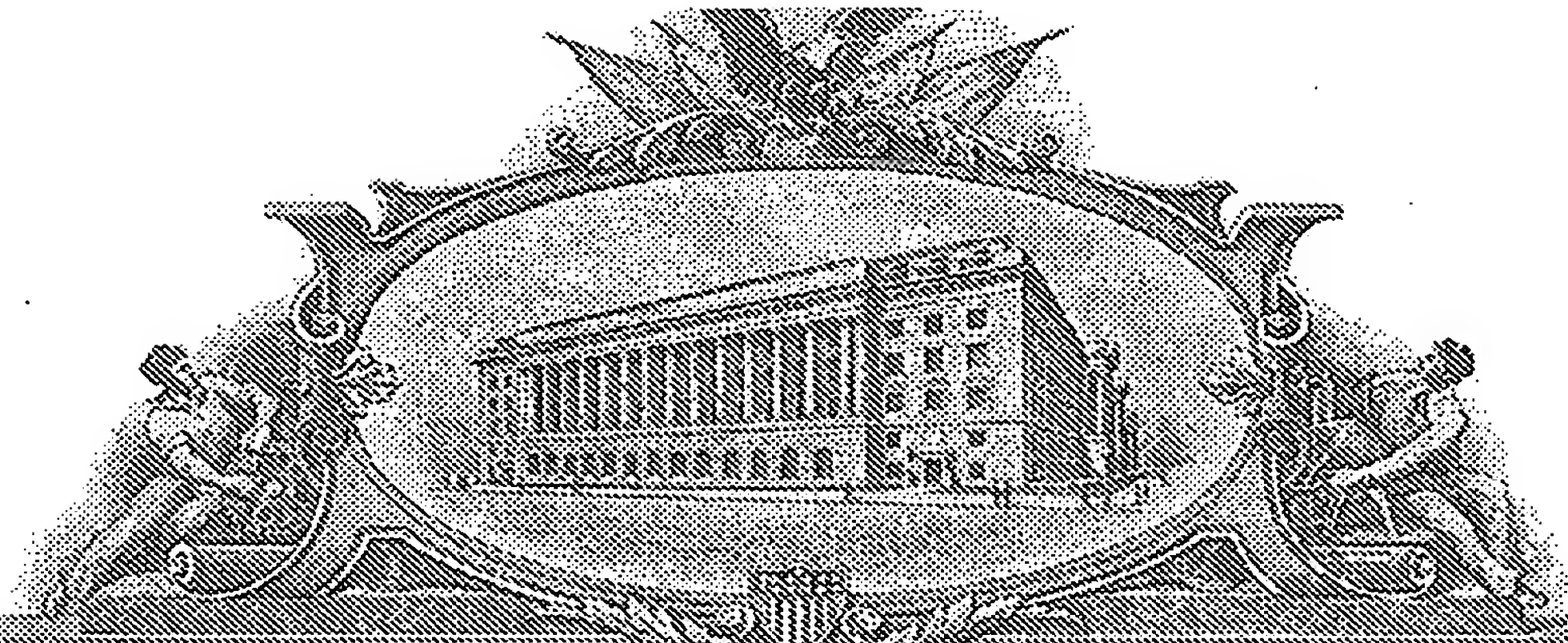


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PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53(c).

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The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.					
<input checked="" type="checkbox"/> No.					
<input type="checkbox"/> Yes, the name of the U.S. Government agency and the Government contract number are: _____					

[Page 1 of 2]

Respectfully submitted,

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[Page 2 of 2]

Number 2 of 2

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TRAVEL MONITORING

Background of the Invention

There are several common varieties of technical and data solutions available in the Corporate Travel Management arena, including:

Most travel agencies deliver monthly reports to corporations who utilize their services. These reports are generally delivered as hard copy or sometimes in Electronic Spreadsheet (i.e., Excel) format. Data for a specific month is generally delivered pursuant to the end of that month.

Most Corporate Card providers deliver monthly reports to corporations who utilize their services. These reports are generally delivered as hard copy or sometimes in Electronic Spreadsheet (i.e., Excel) format. Data for a specific month is generally delivered pursuant to the end of the month. This data is also sometimes available online, and in some cases, corporations can go online and create custom reports which will pull the data desired for a custom report – which for a specific month is generally delivered pursuant to the end of that month.

For further background, see:

**United States Patent
Shoolery , et al.**

**5,570,283
October 29, 1996**

Corporate travel controller

A system for controlling travel primarily in a corporate environment that interconnects travelers, travel agents and airline CRSs so that a traveler can communicate with the CRS with a user friendly GUI to obtain schedule information and transfer such to a travel agent, the travel agent can use the selected schedule information for ticketing and to assure the lowest cost while the entire trip information is stored locally for management control. The system includes multiple connects to the CRS to overcome data transfer limitations specific to airline CRSs.

System for corporate travel planning and management

A system and method for processing travel data and travel receipts. Travel data including travel segments is received by the system. Receipts for the trip are also received from a credit card provider. The received credit card data and travel data are each converted into a predefined format. The converted information is compared to match information in the receipts and the travel data such as chain codes or dates of travel. **A list of matching data is output, such as to use in preparing an expense report.**

Pre- and post-ticketed travel reservation information management system

Methods and system for effecting the instantaneous data transmission to a locally operated computer system upon an occurrence in the computer reservation system (CRS). Specifically, a method for automatically generating pre-ticketed travel information is disclosed, in which booked reservation information and traveler information is automatically transmitted to a locally operated computer system as soon as the booking of the reservation is complete. When the reservation information included more than one travel transaction, such as an air transaction, a hotel transaction and a rental car transaction, the traveler and reservation information is stored in a manner to track common information between different travel transactions, such as sale information, rather than track individual travel transactions. Also, a method of automatically updating an existing customer profile in a locally operated computer system upon the detection of the update of the corresponding customer profile in a (CRS) is discussed.

**United States Patent
Shoolery , et al.**

**5,570,283
October 29, 1996**

Corporate travel controller

A system for controlling travel primarily in a corporate environment that interconnects travelers, travel agents and airline CRSs so that a traveler can communicate with the CRS with a user friendly GUI to obtain schedule information and transfer such to a travel agent, the travel agent can use the selected schedule information for ticketing and to assure the lowest cost while the entire trip information is stored locally for management control. The system includes multiple connects to the CRS to overcome data transfer limitations specific to airline CRSs.

**United States Patent
O'Brien**

**5,832,453
November 3, 1998**

Computer system and method for determining a travel scheme minimizing travel costs for an organization

A computer system and a method for determining a travel scheme minimizing travel costs for an organization, where the organization expects to purchase travel trips for a plurality of travelers for a plurality of travel links. Each travel link comprises a travel origin and a travel destination, and is served by at least one of the carriers. The system comprises a data input device for receiving travel information relating to the carriers and the links, a data storage device for storing the travel information received by the data input device, a processor, and a data output device. From the travel information, the system constructs an objective function representing a travel cost to the organization to purchase travel trips for the plurality of travelers for the plurality of predetermined links, and a set of constraints comprising restrictions relating to the objective function. The constraints are applied to the objective function to determine a solution of the objective function that satisfies the constraints and that minimizes the travel costs of the organization, and a data output device then generates a report representative of the solution. The travel information comprises travel cost information for each link for each carrier serving the link, demand and supply information pertaining to a projected demand for each link and a projected supply for each carrier, and carrier goal information pertaining to any predetermined goal the organization may have with respect to any of the carriers.

United States Patent
Dettelbach , et al.

5,253,166
October 12, 1993

Pre-ticket travel reservation record keeping system

A record keeping system communicates with an airline's customer reservation system and a corporate client database system. A dedicated queue within the customer reservation system is accessed daily by the record keeping system to download data comprising travel itineraries. A relational database control within the record keeping system organizes the pre-travel data for efficient use by a corporate client. The reorganized data thus downloaded and organized is sent daily to the corporate clients for use in their own local database systems.

United States Patent
Ahlstrom , et al.

4,862,357
August 29, 1989

Computer reservation system with means to rank travel itineraries chosen in terms of schedule/fare data

A remote data base containing flight schedule, fare, and fare limitations information is accessed from a local computer terminal. The information retrieved is sorted and scored in accordance with a predetermined travel policy stored in the local computer memory, and as applied to a proposed travel itinerary. A ranked list of applicable flights is merged into a single display.

GENERAL SUMMARY OF THE PRESENT INVENTION

It is an object of the present invention to provide a system for integrating, organizing and displaying travel data, corporate card data and traveler profile information from several GDS's (Global Distributions Systems), Travel Agencies and Credit Card companies electronic data and in real time.

It is another object of the present invention to provide a means to translate the computer protocol of each GDS, Agency and Credit Card electronic data to a common protocol.

It is also an object of the present invention to provide on screen a real time display of the individual Travel and Credit Cards from each member of the participating travel program and of the electronic exchanges organized by the GDS, Travel Agency and by Credit Card Companies.

It is further an object of the present invention to allow the aggregated Travel Agency, GDS and Credit Card information to be filtered through client driven specification and configuration parameters that provides maximum data granularity.

It is another object of the present invention to provide a system by which this aggregated data can be transmitted to the customer either through direct lines, the Internet or via any other form of network for display, management, reporting, interaction and execution.

It is also an object of the present invention to provide a Total Corporate Travel Management system where a single application on a single computer terminal can receive and manage data any of the participating GDS, Agencies and Credit Card Companies.

It is an additional object of the present invention to allow a customer of the present system to take advantage of all the special data features of each GDS, Agencies and Credit Card Companies, such as the ability to pass through direct commands, or specify data execution parameters.

It is further an object of the invention to analyze the data from the various GDS, Agencies and Credit Card Companies to calculate real-time metrics and determine the occurrence of certain types of Travel and Card related events.

It is yet again an object of this invention to limit the information supplied from the GDS, Agencies and Credit Card Companies to a customer of the present invention to only those GDS, Agencies and Credit Card Companies where the customer is a client, member or electronic exchange user.

It is still another object of the invention to use the above-mentioned analytical capabilities to aid a customer of the present invention to make various business decisions, such as when and where to move market share.

These and other objects are achieved in the present invention consisting of a centralized Credit Card, Travel Management and related data consolidation system. In this system, each customer uses a single application on a single terminal to view, and analyze travel, card and related policy information from and to conduct transactions with GDS, Agencies and Credit Card Companies.

A consolidating computer system ("TRAVELMASTER") supplies the GDS, Agencies and Credit Card Companies information and processes the transactions in the present system.

The terminals, each participating computer, each participating GDS, Agencies and Credit Card Companies form a computer network. The GDS, Agencies and Credit Card Companies, in actuality, each are complex systems consisting of a number of computers and networks. The TRAVELMASTER aggregates Travel & Card book information from each participating ECN Travel & Card book computer including security, Travel & Card identification, and Travel/Credit Card price Data. The combined Data is displayed to customers separately and/or integrated for Travels and Credit Cards, and sorted by price, volume and other available attributes as desired by the customer.

TravelMaster forwards to each terminal Data from only those GDS, Agencies and Credit Card Companies, that the customer is a member or electronic exchange user and thus entitled to receive. The rights to the Data may be based on the customer's arrangement or membership in a GDS, Agencies and Credit Card Companies. Thus a customer may only be able to receive Data from a subset of GDS, Agencies and Credit Card Companies to which the client is connected.

Once the Data from a number of GDS, Agencies and Credit Card Companies are combined in TRAVELMASTER, either TRAVELMASTER, the terminal, or both can be used to calculate real time metrics. The real time metrics, such as volume trends, price trends, and various on demand calculations, can aid the client in making decisions. TRAVELMASTER can also determine the occurrence of market events in which its customers may be interested, such as a new high Travel for the day or a locked market where the best Travel is equal to the best Travel Vendor.

The terminal both displays the market Data provided to it by TRAVELMASTER and allows the customer to initiate Travel and/or Credit Card transactions and route them through TRAVELMASTER to any GDS, Agencies and Credit Card Companies for which the customer is has permission. These transactions will be incorporated in the travel and card data distributed by TRAVELMASTER. The terminal can also execute book or cancel transactions against listed Travel and Credit Cards, and by using TRAVELMASTER to place the request using the correct protocol for the relevant GDS, Agencies and Credit Card Companies.

While the above discussion was in terms of GDS, Agencies and Credit Card Companies, it applies here and throughout not only to GDS, Agencies and Credit Card Companies but ATDSs (Alternate Travel Data Sources) which generates the equivalent Data. Equally, while there are a number of GDS, Agencies and Credit Card Companies, we will use SABRE, Tri-Pen and American Express as an example throughout this document. The term traveler and customer are used throughout to designate any potential user of the present invention including Travelers, Travel Managers, Corporate Card Managers, Executives, Administrative and Support staff, Security Directors, System Administrators, Travel Supplies and more.

Detailed Summary of the Invention

A Corporate Travel Management System where each system user as a single customer utilizes a single computer terminal to view and analyze real time corporate travel data for multiple business units and multiple travelers is disclosed. The system consolidates data which is flowing electronically from multiple electronic data sources and multiple suppliers. The system is further utilized to communicate with all individual travelers, as well as any individual(s) from multiple suppliers, and all management users at a specific client regarding travel issues, analysis of the travel spend, and contract/audit issues simultaneously.

The consolidating computer system aggregates all electronic data from each data source, including Corporate Card provider(s), Travel Agency Services supplier(s) and ancillary travel services Provider(s) and presents the information in a variety of formats for instant analysis and complete end-to-end management of travel expenditures for the management team at the client company.

The system is designed to take data feeds from numerous disparate sources (multiple travel agency booking offices worldwide, online booking sources a corporation has contracted with, corporate card data sources worldwide, feeds from other ancillary providers such as ground transportation companies, security specialists, travel benchmarking information, and the like) on a real time basis (as transactions are occurring). The system automatically completely integrates that data on a real time basis to provide comprehensive data analysis allowing corporations an unprecedented amount of control over their travel program. The system will also provide an unprecedented ability to track corporate travelers on the road, including tracking all deviations travelers make from their originally booked itineraries on a real time basis.

The system ("TravelMaster") integrates all the data from all sources and presents it to the user(s) in easily manipulated formats on their computer screen. This provides specific highlighting of travelers who have deviated from corporate policy, or travelers who have deviated from their planned itinerary. The system also highlights pricing errors on the part of the agency office, or on the part of suppliers where contract pricing is in place, thus providing a built in audit tool.

The data integration and analysis tools additionally give the corporation spend analysis and tools for increased leveraged negotiations with their existing travel suppliers and identifies potential travel suppliers with which the corporation should be focusing on negotiated pricing.

In addition, TravelMaster provides an automated Travel Budgeting tool for Project and Program managers within the corporation, which in addition to automating the budget planning process, immediately identifies to the Travel Management team any new destinations which require attention in pro-actively negotiating with needed travel

suppliers servicing the new destinations, and thus providing additional savings to the corporation.

TravelMaster utilizes a highly flexible interface and architecture, allowing corporations to define their user types and roles within the organization to meet the ever changing needs of their travel program and travel program management. TravelMaster encompasses the following default types of users (but these user groups/types can be expanded on an unlimited custom basis), and gives each of these user types unique tools and analysis screens and reporting:

- Corporate Travel Directors/Travel Managers
- Company Corporate Card Managers
- Company Director of Security
- Company Executives
- Company Travelers
- Company Admin's who plan Travel for Others
- Budgeting Tool for Project & Program Managers
- RFP Management (Preparation, Initiation, Acceptance, Approval and Control) All travel services Air, hotel, car, GT, Rail etc.)
- The Company's Travel Suppliers
- Customer Service Tracking

In addition, the TravelMaster system provides a real-time communications system for all of these user groups.

The TravelMaster also provides a comprehensive end-to-end management tool for all aspects of the corporate travel program from Pre-Travel approvals; to policy exception approvals; to comprehensive integration of data from all sources on a global basis; to real-time tracking of all travelers and all expenditures (including features especially designed for corporate directors of Security); to performance measurement and analysis relative to the corporation's current travel supplier contracts, as well as highlighting potential opportunities to negotiate with travel suppliers not yet a part of the corporation's travel program; to post-travel T&E accounting and expense reporting.

Further, TravelMaster provides audit capabilities of all negotiated rates with travel suppliers (i.e., confirming that travelers are paying the proper rates, and highlighting

errors in rates charged by travel suppliers vs. negotiated contracts), as well as audit capabilities of the work being done by travel agency personnel, and others involved during the process of completion of travel.

The computer system additionally presents to each traveler their individual information , and any ancillary information required in Travel & Card for the specific traveler to complete their travel, analyze their personal travel spend, benchmark that cost against other travelers at the same or different corporate levels, and reconcile all travel expenses.

Traditionally companies have relied on accounts payable (A/P) clerks to validate bills and catch errors. However, Travel bills can be inordinately difficult to decipher and matching bookings data to corporate card data comprehensively has often been nearly impossible. Companies often invested many hours with little return or simply paid bills without validating, just to keep up with the volume. Additionally, no company was able to match the entirety of their travel bookings data to their corporate card data in such a way as to analyze the two data streams, and what was actually happening inside their travel program on a real-time basis.

Because TravelMaster provides a solution to various gaps discussed above, giving the company better enterprise insight into travel spending and usage information, companies can then apply that knowledge towards more efficient management of its users and suppliers. Enterprises can realize strategic benefits by fine-tuning the management of services, vendors, technology, and pricing plans.

These benefits are summarized in Table 1 below:

Table 1: Optimization Benefits

- Influence preferred provider usage by establishing financial policies with threshold alerts and variance reports
- Facilitates budget planning decisions with a solid understanding of total travel usage and spend
- Leverage peer benchmark information to improve contract terms (pricing, SLAs, etc.)
- Leverage corporate buying power with vendors for improved pricing
- Optimize rate plans based on known usage patterns
- Optimization of air carrier, hotel, rental car and travel services suppliers contracts based on better contract terms
- Enable user accountability through accounting and charge back mechanisms
- Optimize traveler security through real-time interaction with the corporation's Security Organization
- Facilitate real-time analysis of all travel spend and traveler behavior
- Facilitates ongoing audit of all travel suppliers to ensure negotiated pricing is appropriately applied

TravelMaster allows companies to organize and integrate their strategies for every travel expense category around five key processes on a real-time basis at a level of detail and data integration which has never previously been available:

Analyze — conduct companywide spending analysis to identify and prioritize savings opportunities, including supply base rationalization and purchase aggregation

Plan — develop optimal sourcing and procurement strategies for both indirect and direct expenditures based on existing and future purchase requirements across the enterprise

Source — identify, evaluate, negotiate, and configure trading relationships

Buy — communicate, execute, and settle payment against negotiated trading agreements and contracts

Monitor — measure and enforce internal contract compliance and external supplier performance

By integrating all Corporate Card and Travel Data from multiple sources across the entire corporation or enterprise, TravelMaster provides an unprecedented ability for a corporation to control their travelers and the travel spend with a level of detailed control

never previously possible by providing:

- A system of true Checks and Balances on Travel Expenses
- Financial Visibility and Control
- Increased Travel Program Compliance
- Immediately Identification and Control of Leakage
- Ease of Program Adjustments
- Legal Compliance (Sarbanes-Oxley & other requirements)
- Information with which Travel Managers can compete with the data airlines are now consolidating through agencies such as Prism® and TRX data consolidation.

Benefits to the corporation include savings and control from a number of areas:

- ➔ Negotiating Leverage and Tighter Program Management
 - Travel Budget Planning allows pro-active negotiation with travel suppliers before travel begins:
 - Airline
 - Hotel
 - Other site-specific vendors
 - Increased leverage in travel supplier negotiations due to more immediate and robust data and analysis tools
- ➔ Automation
 - Pre-Trip Approval Process reduces cost and travel policy exceptions
 - Automated Pre-Flight notifications to holders of Non-Refundable tickets reduces breakage
 - On-the-Fly automated RFP capabilities
 - No need for third party facilitation
 - Prompt identification and addition of new travel suppliers to support program
 - Hotels
 - Airlines
 - Groups and Meetings
 - Increased Awareness and Tighter Management of Corporate Card Holders through automated process
 - Reduce 180 days losses
 - Positive effect on client held days
 - Unutilized Ticket Identification & Refund Notifications
 - E-Tickets
 - Paper Tickets (never previously identified)
 - Reduces or eliminates agency fees for tracking of unutilized tickets
 - Automated Travel Budget Projections, automates the budget process, reduces man-hours spend on preparing travel budgets and allows for pro-active travel supplier negotiations in new destinations

- ➔ **Cost Reduction/Fee Avoidance**
 - Reduction in man-hours required for data compilation and analysis
 - Reduction in man-hours required for travel program management
 - Reduction in travel department headcount
 - Reduction in cost of custom data production by Travel Agency
 - Reduction of cost being paid to third party data consolidator

- ➔ **Audit Functions (Real Time)**
 - Airline Faring Errors
 - Back-to-Back Bookings
 - Reduce Debit Memos
 - Hotel Rate Errors
 - Car Rental Rate Errors
 - Fee Allocator charges vs. returns
 - Security Audits

- ➔ **Control & Compliance**
 - Increased Travel Policy compliance
 - Increased visibility of policy deviations
 - Security and Risk Management Compliance
 - High Risk Travel Controls & Processes
 - Tighter controls on en-route changes
 - Increased awareness and control of Supplier Contract Performance
 - Tighter monitoring and management of Preferred Supplier utilization

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a diagrammatic chart of the invention and how the invention works from a high level process flow and architecture prospective;

FIG. 2 is a diagrammatic chart of global data sources referenced in this application, and how they feed into TravelMaster (the invention);

FIG. 3 is a diagrammatic chart of the parsing technology that is used to process the incoming disparate travel, agency and card data;

FIG. 4 is a diagrammatic chart of the general process and workflow of how the data is taken into the invention after the parsing is complete;

FIG. 5 is a diagrammatic chart of the legacy connection process by which the invention uses to connect to other systems to supplement or fulfill additional operational data requirements;

FIG. 6 is a diagrammatic chart showing the open architecture of the invention;

FIG. 7 is a diagrammatic chart representing the typical service lifecycle of the invention;

FIG. 8 is a diagrammatic chart of strategic travel management infrastructure which the invention enables corporations to deploy and achieve while in use.

FIG. 9 is a diagrammatic chart representing the 4 levels of travel management maturity, and how the invention enables users of the invention to achieve greater success and travel program management maturity;

FIG. 10 is a diagrammatic presentation of the typical types of users that will use the invention. Users, Roles and Types are 100% customizable by the client;

FIG. 11 is a representation of a typical screen of the present invention showing features and functionality that a Travel Manager would use;

FIG. 12 is a representation of a typical screen of the present invention showing integrated Travel and Corporate Card data, and how this integrated data can be used to identify changes travelers make while en-route;

FIG. 13 is a representation of a typical screen of the present invention showing Airline Management interface with accumulated booking, travel and card data;

FIG. 14 is a representation of a typical screen of the present invention showing a summary of all pending or approved travel related spend for both travel and corporate card in a single interface;

FIG. 15 is a representation of a typical screen of the present invention showing how companies using the integrated data, can identify policy exceptions before they happen, and facilitate the approval process;

FIG. 16 is a representation of a typical screen of the present invention showing the expense reporting module, displaying integrated data from all travel and card sources at a summary level;

FIG. 17 is a representation of a typical screen of the present invention showing the expense reporting module, displaying integrated data from all travel and card sources at a detailed level by month, and highlighting which is card data etc.;

FIG. 18 is a representation of a typical screen of the present invention showing the main reports screen, allowing a user to choose and create reports for integrated and separate data analysis.;

FIG. 19 is a representation of a typical screen of the present invention showing a typical corporate card management interface, displaying all cards and card types utilized;

FIG. 20 is a representation of a typical screen of the present invention showing a performance overview for a corporate card account (i.e. AMEX). Showing how the card is performing against goal based on current card and travel booking data with card utilization;

FIG. 21 is a representation of a typical screen of the present invention showing detailed reports outlining total card spend against travel spend.

FIG. 22 is a representation of a typical screen of the present invention showing a detailed breakdown of a corporate card holders spend related to travel;

FIG. 23 is a representation of a typical screen of the present invention showing a typical report screen showing the various standard and customized reports based on card data;

FIG. 24 is a representation of a typical screen of the present invention showing the management console;

FIG. 25 is a representation of a typical screen of the present invention showing how the integrated data can be used by a security director within a company;

FIG. 26 is a representation of a typical screen of the present invention showing how a company executive would view the integrated data;

FIG. 27 is a representation of a typical screen of the present invention showing how a traveler would access and view data related to travel and credit card;

FIG. 28 is a representation of a typical screen of the present invention showing the TravelCommander module that facilitates instant communication and information transfer for card and travel data. (This module will be subject of another patent application;

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Figure 1: How Total Travel Cost Management Works

The invention: TravelMaster

This diagram depicts in detail how the data from the GDS, Travel Agencies, Corporate Cards and other TDS are fed into the TravelMaster Parsing engine. At the same time it is pulling in client data from multiple systems like AP/GL, Policies and other legacy systems. This data is parsed into a new STANDARD DATA PROTOCOL formatted in XML and then the pre-defined and/or client specific business rules are applied before the data is inserted into the TravelMaster database.

The proprietary parsing engine (also the subject of a future patent) has a unique entity resolver, DTD handler, Error Handler and Content handler which verifies the data is in the appropriate XML structure and integrated protocol before database insertion.

The diagram further shows how the data is also passed through a Validation engine before data is sent to other systems (i.e. AP/GL, user interfaces, policy or other exceptions processing). It is also validated before sending to the reports engine and then on to the management functions within the invention. (i.e. Contract Management, Supplier Management, User management, Travel Management and so on.).

The data is essentially:

- 1) Captured in any electronic format available today (i.e. EDI, XML, XLS, EBS, Text etc.)
- 2) Captured from any travel data and corporate card sources (i.e. GDS, Agency and Card etc)
- 3) Parsed through the DataMaster dynamic parsing technology
- 4) Transformed into a common protocol and formatted in XML and INTEGRATED
- 5) Validated
- 6) Presented to the user in various visual formats, interfaces or documents
- 7) Made available to manage, change and control
- 8) Results in optimal travel management capabilities

Figure 2: Total Travel Cost Management Service Lifecycle

This diagram depicts the lifecycle related to the invention;

Monitor Travel and Card Data:

Data Processing

Data Validation

Data Correction

Buy Travel related services:

Accounting
Disbursement
RFP
Contract

Analyze data and performance:

Reporting
Pre-Trip Authorization
Budgeting
Approvals

Travel Management & Planning:

Supplier Management
Contract Management
Inventory Management
User Management
Policy Management
Exception Management
Other

Source Travel Services:

Benchmark
Negotiate
Procure

Figure 3: Data Sources

1. In each country there are travel service providers who produce separate data, there are corporate card providers who produce separate data and there are ancillary travel vendors who may service a company which produce separate data.
2. In each country where the company has facilities, they may have one facility or multiple facilities.
3. Each of these facilities houses travelers, from one traveler to thousands of travelers.
4. Each of these travelers, depending upon company policy, may be utilize one or more travel agency, and one or more travel offices of each agency utilized. Each of these travel offices are producing data, and travel data is consolidated by each individual agency. However, each individual agency has separate data streams for each country.

Each of these travelers will also be carrying one or more corporate cards provided by separate corporate card companies. Even when a company utilizes only a single corporate card across all travelers, the corporate card company produces separate data in each country and the data streams are separate. If a company utilizes more than one corporate card, there are multiple data streams with corporate card data coming from each individual country.

Likewise, each individual traveler may be utilizing one or more ancillary travel vendors which are approved by the company, and each of these travel vendors is usually producing separate data for each individual country

5. The separate data streams will now all flow into
6. The TravelMaster Parser, where the data will be matched and integrated and
7. Fed into the TravelMaster Interface on a real time basis.
8. Where the data is ready to display to
9. The various system users of TravelMaster within the company
10. Allowing the company to, on a real time basis, achieve Total Travel Cost Management.

Figure 4: DataMaster – Dynamic Parsing Engine

This diagram depicts the parsing engine which takes the travel, card and other travel related data from disparate sources and then parses it into an integrated common data protocol.

As describe earlier, the parser takes any incoming file type available today and runs it through it's unique parsing engine. The engine consists of data file type parrsers driven by a database of grammar files that produce the language which allows the parser to understand what type is being entered into the system, and then parse it correctly... applying the appropriate rules, and then sending it through data resolver and handlers before being validated.

Although the process seems simple, the output of the common integrated travel and card data in a common protocol formatted in XML is unique to this invention.

We must also note here that our technology is platform and database independent.

Figure 5: DataMaster – Workflow Diagram

This diagram depicts an example of workflow that will be used in the invention. The diagram shows the receipt of the data, and both automated and manual workflows that lead into the backend processing.

Figure 6: DataMaster – Deploying the invention

This diagram depicts the deployment of the invention that will result in a Strategic Travel Management Infrastructure.

Define:

- Gather Requirements
- Assess Needs
- Analyze Current Data

Deploy:

- Select Approach
- Evaluate Techniques & Tools

Prepare:

- Setup Applications
- Construct Roadmap
- Establish Performance Matrix
- Define Global Requirements
- Build Guidelines

Execute:

- Coordinate Logistics
- Mine Data
- Create Intelligence
- Collect and Groom Data
- Organize and Parse Data

Assess:

- Design Reports
- Calculate Matrix
- Interpret Results

Adjust:

- Make Recommendations
- Develop Documentation
- Train Staff
- Complete Hand-off

Figure 7: Open Application Architecture

This diagram depicts the open architecture in which the invention utilizes. N-Tier and fully scalable... showing the data coming into the database from the travel, card and legacy sources and then being integrated and presented in various formats and delivered in a portal type layer.

Figure 8: Common Integration framework

This diagram depicts how the common integration framework of the invention allows for both inbound and outbound data communication between TravelMaster and other applications.

- 1) The TravelMaster Applications
 - a. Capture Business Events
 - b. Apply Business Rules
- 2) e-Commerce / XML Gateway
 - a. Applies Mappy Rules
 - b. Applies Data Transformations
 - c. Applies Validation Rules
 - d. Subscribes XML on Queue
 - e. Publish XML on Queue

←----- inbound / outbound Travel and Card trading partner file-----→
←----- inbound / outbound XML on Queue -----→

- 3) Senders / Reciever of Integration Data
 - a. TravelMaster Data Exchange
 - b. TravelMaster Parsing and Integration
 - c. EDI Translator
 - d. Third Party Applications (i.e. Legacy, CRM/ARP, EAI, other)
 - e. Third Party Middleware

Figure 9: 4 levels of Total Travel Cost Management

There are actually four levels to Total Travel Cost Management:

1. First level of cost management is decreased cost of services, which is where most companies are today in travel cost management.

- Company has gained a base level of decreased cost of services, picking the lowest hanging fruit through simple negotiations with airlines, rental cars, travel agency, hotels, etc.
- Company has organized things a little better, set better policies to support those efforts.

But the company can only go so far because they are constrained by the abilities they have from a technology standpoint with what is currently available. Especially in a volatile space like travel, where everyone is constantly in motion and the disparate data sources are not integrated, and are very difficult to manually integrate in a meaningful way. Today, travel cost management is more reactive than proactive. By the time one area of leakage or additional savings is identified and researched, there is a realization that with industry changes, multiple other areas of travel cost management have been unidentified and have not been dealt with. This becomes a vicious cycle.

2. The next level an enterprise must achieve is complete services management. This level can only be achieved through the utilization of technology, especially in travel cost management, which is extremely detail intensive (e.g. for a medium size travel program there may be as many as 6,000 or more travel itineraries per month, and the travel manager does not receive data until 30 to 45 days later; further data from various sources is not integrated).

While there is some technology in place today that provides some pieces of the puzzle of Travel Management from a technology prospective,

- The technology available is separate, non-integrated applications
- Many of the available applications are not robust, and although they do arm the company with some information, currently travel cost management still depends largely on manual integration of data from various data sources.

What has never existed previously is technology that provides a comprehensive end-to-end solution for total travel cost and services management. TravelMaster is designed to facilitate the rapid maturity within an enterprise to achieve complete travel management driving compliance and the real-time complete visibility and control of non-compliance.

So, once an organization or an enterprise has achieved total travel cost management, they are enabled to utilize internal resources better and increase the productivity of

those resources dramatically.

Because of the new technology that TravelMaster brings to the process the company will be empowered to take real control of the total travel environment. Thus, allowing the enterprise to properly deploy resources to specific tasks, and allowing senior level management such as financial executives, security directors, travel purchasing teams, etc. to interact with the technology in such a way that productivity is increased.

3. So cost management in real-time driven by the TravelMaster technology will achieve greater levels of savings and key individuals within the organization are not wasting time anymore

- running unnecessary reports,
- trying to manually analyze data from multiple sources,
- identify rate errors and
- verify contract compliance

Increased productivity in and of itself will result in decreased costs due to the ability to go ever deeper in managing the travel and enabling real pro-actively negotiated discounts with travel suppliers.

Once an organization has achieved this level of productivity they are able to take a step back and focus on continuous optimization and operating performance of the entire travel function and travel needs of the organization.

4. The company or enterprise is then able to pro-actively react to the changing needs of the enterprise on a continuous basis. This will allow them to optimize their own time to market and the enterprise's competitive advantage by insuring that the right services are implemented at the right time with the right suppliers at the right price.

Figure 10: Invention Typical User Types/ Roles

This diagram represents the typical types/Roles of users that will use the invention. Users, Roles and Types are 100% customizable by the client;

Today's corporate travel management programs are very diverse in size and organizational structure. Due to the need for organizations to be flexible, and to manage their travel related data and programs in a way that meets the needs of the organization, TravelMaster provides the ability to define types, roles and user dynamically as needed. (For additional information regarding typical user types and roles, please see page 11).

Figure 11: Representation of a typical Typical Travel Manager Screen in the present invention showing common features and functionality.

FIG. 11 is a representation of a typical screen of the present invention showing features and functionality that a Travel Manager would use.

For the typical Travel Manager user, the most important feature is screen area #1, which shows travel bookings data (taken from the travel agency feed), and what is happening as the travelers are on the road enroute. Integrated Corporate Card and Travel Data has never been presented to the travel manager in real time, thus TravelMaster lends an unprecedented level of transparency to the travel management process. Throughout the TravelMaster application, this integrated corporate card and travel data has been standardized and presented to the user in a format that allows complete transparency of what is occurring in the travel program, and empowers the user to be able to make decisions, and take charge of the corporation's travel in significant, meaningful, efficient ways never before possible.

Other features and functionality on this page include #2, summary data regarding the travel program which gives the travel manager an overview of the integrated card and travel data.

The area of the screen marked #3 allows the Travel Manager to view and action all pending items which require approval.

Screen area 4 is an area for meetings and action items, and an in-box area for incoming items from travelers and other team members.

Figure 12: Representation of a typical Typical Travel and Card Data Integration Screen in the present invention.

FIG. 12 is a representation of a typical screen of the present invention showing integrated Travel and Corporate Card data, and how this integrated data can be used to identify changes travelers make while en-route;

This is a different screen view which solely presents to the travel manager in a dynamically integrated fashion integrated travel and corporate card data, in real time – as travel is occurring on the road, and changes are being made enroute by the travelers. The program automatically flags changes (#1) which result in additional cost, as those changes which may prevent the corporation from meeting their goals with preferred vendors which have extended negotiated rates to the corporation.

This level of detailed reporting in real time enables the Travel Management team to contact the traveler on the road in real time to request justification either via voice or via e-mail enabled handheld devices. It is anticipated that the simple knowledge of this level of visibility on the part of the travelers will drive travel policy compliance.

No travel management department has ever before had the transparency and visibility into the process of the actually dynamically happening travel previously. This functionality allows the Travel Management team a level of control over the process which has never previously existed.

Previously a Travel Management team would have to manually integrate data from different sources, working with data which was 30 days or more old. In even a medium size travel program with 3,000 trips or more each month, the task of integrating the detail for each traveler would have been a monumental task that would have been extremely difficult or impossible to accomplish.

Figure 13: Representation of a typical Airline Management Screen in the present invention with integrated Travel and Card Data.

FIG. 13 is a representation of a typical screen of the present invention showing Airline Management interface with accumulated booking, travel and card data. This screen shows the travel management team a demographic representation (1), as well as statistical data (2) regarding the coverage represented by their current airline discount contracts in place with the corporation's preferred vendors. The screen is designed to highlight whether or not the travel management team has made good choices in terms of the preferred airlines that have been accepted into the program. Further, the screen will highlight whether those choices continue to be good choices for the corporation's travel.

A corporate travel program is extremely dynamic and individual from one corporation to the next. Travel patterns of the corporate travelers may change from month to month or even week to week based on current clients, current programs changing, new clients, new programs and new product lines which require travel to new and previously unvisited destinations.

Consequently it is very important for the travel management team to be able to establish in real time how well their current airline contracts meet the needs of the business travel requirements of the corporation.

Previously most travel teams did an analysis once or twice a year relative to the coverage they gained from current airline contracts and relationships. Consequently the "leakage" (travel which might take place without any negotiated discount being in place, which increases the cost to the corporation for that travel), has in the past been quite high in many travel programs.

TravelMaster solves this problem by automating the travel management team's ability to see at a glance what kind of coverage their airline contracts/relationships are providing to their travelers on a daily basis.

Figure 14: Representation of a typical Summary of Total Travel Spend Screen in the present invention with integrated Travel and Card Data.

FIG. 14 is a representation of a typical screen of the present invention showing a summary of all pending or approved travel related spend for both travel and corporate card in a single interface. This screen gives the travel management team immediate insight into bookings at all preferred vendors, vs. bookings of non-preferred vendors – as well as the cost savings/lost savings associated with these bookings.

Further, drilling down from this screen allows the travel management team to identify individuals who have booked non-preferred vendors and allows the travel management team the ability to

contact these travelers in real-time and potentially shift volume back to preferred vendors in some situations (especially situations where travelers have chosen specific vendors for their own reasons, such as frequent flyer mileage considerations).

Since travel management teams have previously been working with data that is past-date travel that has already taken place, they have never before been empowered to make changes to the travel of their personnel which creates cost efficiencies on the spot as TravelMaster does.

Figure 15: Representation of a typical Policy Exception Screen in the present invention with integrated Travel and Card Data.

FIG. 15 is a representation of a typical screen of the present invention showing how companies using the integrated data, can identify policy exceptions before they happen, and facilitate the approval process. This image follows image #14 above, and highlights how the travel management team immediately identifies individuals who have booked travel components which are exceptions to the corporation's travel policy, and allowing the travel management team to action such components directly with the individual traveler, or at least to ensure that the traveler is contacted regarding the non-compliance issues in such a way that the traveler is aware that their non-compliance is highly visible and is being noted.

Further, non-compliance is flagged within the TravelMaster system and authorization at higher levels is required relative to compliance issues. This is especially critical in the expense reporting process, where today many non-compliance issues are glossed over because the traveler committed the breach of policy weeks previously. Many companies today have only cursory audits of expense reports, and even non-compliant expenses are paid at many companies due to the lapse of time, and the lack of visibility into what was available to the traveler at the time the traveler was on the road.

Figure 16: Representation of a typical Expense Reporting Screen in the present invention with integrated Travel and Card Data.

FIG. 16 is a representation of a typical screen of the present invention showing the expense reporting module, displaying integrated data from all travel and card sources at a summary level. This particular summary data is especially important due to the fact that in virtually 100% of all corporate travel programs the travel management team has very little transparency into the total expenses incurred on the road, especially expenses that may have been paid with cash, or may have been paid utilizing a personal credit card.

The TravelMaster system takes into account how valuable insight into the actual expense reporting data is to the travel management team and summarizes this data for them from the expense reporting module in order to allow the travel management team to leverage their negotiations with travel suppliers based on the total correct travel volume of the company (as opposed to negotiating based solely on bookings data which is subject to change or cancellation at any time).

Figure 17: Representation of a typical Traveler's Expense Report Screen in the present invention with integrated Travel and Card Data.

FIG. 17 is a representation of a typical screen of the present invention showing the interfaces within the expense reporting module which will be utilized by individual travelers and their assistants. This particular image shows a calendar view of the traveler's past and future trips displaying integrated data from all travel and card sources at a detailed level by month. The TravelMaster system has the ability to differentiate between and highlight for the traveler which data being viewed comes from the travel agency bookings data, and which data comes from the corporate card data.

Further, since the data displayed to the traveler is archived and available to the traveler at all times, the traveler has the ability to reference the data at any time they wish to repeat a trip, or utilize the same supplier again.

Having this data available to the traveler will increase their productivity and efficiency in the travel planning process.

Figure 18: Representation of a typical Report Access Screen in the present invention with integrated Travel and Card Data.

FIG. 18 is a representation of a typical screen of the present invention showing the main reports screen, allowing a user to choose and create reports for integrated and separate data analysis. This module of the invention is particularly powerful for the end user, as it allows them to choose from standard reports which are pre-built in the system, and then populate the data for any time-frame they desire at the touch of a button.

Further, this module allows travel management teams to build customized reports based on either corporate card data, travel data or integrated data from both sources, and thus compare and analyze the behavior of their travelers on the road, and determine needed changes to the travel program in order to best support their travelers.

Figure 19: Representation of a typical Airline Management Screen in the present invention with integrated Travel and Card Data.

FIG. 19 is a representation of a typical screen of the present invention showing a typical corporate card management interface, displaying all cards and card types utilized. This module of the invention allows the travel management team more control over the corporate card program, down to the individual card holder level, than has ever been available previously on a real-time basis.

The user can, at a glance see what cards they have outstanding worldwide, or in a single business unit. Utilizing the areas of this module that present individual cardholders who are delinquent or suspended allows the travel management team to action these issues in real-time with the traveler, thus preventing any loss of money to the corporation in a pro-active scenario.

Figure 20: Representation of a typical Corporate Card Performance Overview Screen in the present invention with integrated Travel and Card Data.

FIG. 20 shows how a Corporate Card Manager or other related personnel would access detailed information in regard to the CARD SUPPLIER products and services the company uses within the organization. This screen summarizes the status and other key attributes of the Card Product Supplier, gives compliance and performance measurements that are compared against contract and actual T & E reporting. The trend analysis shows a typical example of how the “Integrated Card and Travel” data can be viewed, and displayed to a user... giving them the transparency needed to empower them to make the right decisions for the Travel Program. This screen in the current invention also provides a dashboard for reviewing NEW, CHANGED or DELETED items.

Figure 21: Representation of a typical Total Card Report vs Travel Spend Screen in the present invention with integrated Travel and Card Data.

FIG. 21 This is another prime example of how the current invention utilizes the newly combined card and travel data format to display summary of spend for the card product utilized, and an immediate comparison to the actual travel spend within the organization. There is no longer a need for separate reporting, interfaces or diagrams. TravelMaster integrates the data and allows the user to view this in a standard format that every organization can understand, utilize as needed and take action on. Graphical representations of the data are also displayed and easily accessible to the end user.

This screen also provides access to Savings, Lost Savings and comparative analysis against preferred and non-preferred card suppliers.

Figure 22: Representation of a typical Corporate Card Holder's Screen in the present invention with integrated Travel and Card Data.

FIG. 22 Here you will see a screen representing how a Traveler, Card Manager, Travel Manager or other authorized personnel can access and review in “real-time”, the charges that a travel incurs while traveling. The data is taken from the actual booking and PNR information provided by the GDS, Agency or ATDS, and matches it with the actual Card usage data coming from the Corporate Card supplier. The integrated data is displayed in to the end user as the charges occur throughout the lifecycle of the trip.

The interface also provides for summary of payment, expiration, usage, credit limits and other pertinent data. The traveler may also make card payments, dispute items and request credits as needed.

Figure 23: Representation of a typical Card Management Reports Screen in the present invention with integrated Travel and Card Data.

FIG. 23 Reporting is a key component in the invention... this allows user to quickly access default and pre-defined reports that seamlessly integrates the data from both card and travel sources. This data is then displayed to the user in a variety of formats including but not limited to HTML, PDF, TXT, XLS and other commonly utilized data and reporting formats.

User may also create CUSTOM reports as needed. The invention gives the ability for users to select data elements and quickly combine them for "On Demand" reporting for card and travel data.

Figure 24: Representation of a typical TravelMaster Administrator Screen in the present invention with integrated Travel and Card Data.

FIG. 24 The management console: This screen represents the current inventions' ability to manage the user types and the interactions that those users will have with the system. Administrators can control import/export and other parameters related to data integration and workflow that drives the system to meet the needs of the organization.

Figure 25: Representation of a typical Security Director's Screen in the present invention with integrated Travel and Card Data.

FIG. 25 Another unique and highly valuable use for integrated card and travel data is for the security directors and managers within an organization. This screen represents a typical interface that a Security Director may utilize in the current invention for tracking High Risk travel and related policies.

The integrated card and travel data proves very useful for security with the organization... as the interface shows, it allows the manager to track Who is Traveling, High Risk Travel that is booked or Pending, Executive Travel that may be to high risk or potentially dangerous countries and more. Obtaining actual booking data immediately provides for quick and decisive action in regards to high risk travel and the policies the govern it.

With the integration of the card data, managers are able to track travelers to ensure they are staying in approved secure hotels and other facilities. The integrated data also ensures compliance on multiple levels and helps to ensure travelers do not deviate from plan.

Figure 26: Representation of a typical Executive Management Screen in the present invention with integrated Travel and Card Data.

FIG. 26 Executive decision making plays a key role in the success of any company. Integrated, Accurate and Real-Time data is critical for today's global economy. This screen represents how the current invention provides a command and control center for company executives, allowing them to view travel and card data in a way that was never possible.

The invention thus empowers executives and decision makers with a proactive approach to managing travel, policies and related expenses. This new data format changes the way organizations can react... providing key insight into card and travel data, and transporting them from having to react when it is too late... to proactively making decisions that positively impact the bottom line.

This type of seamless travel and card data integration into a common understandable and presentable format is the essence of the invention, and will change the face of Travel Management.

Figure 27: Representation of a typical Traveler Screen in the present invention with integrated Travel and Card Data.

FIG. 27 The Traveler: This screen in the present invention represents how a Traveler may interact with the system. Allowing access to Current, Completed and Future travel plans. Travelers also have access to Corp Card data and usage compared with T & E. The invention tracks Booking Information (Travel Data) and dynamically compares it with the Actual (Card data) information as the trip progresses. As the traveler is booking and completing travel... and using the corporate card to pay for travel expenses. This information is gathered in real-time and integrated by the present invention and then presented to the end user.

Travelers also have access to other management and travel related tools and features such as:

- 1) Profile and travel preferences
- 2) Cards on file
- 3) Frequent guest and award programs
- 4) Visa & Passport
- 5) Policies
- 6) Online Booking Engine
- 7) Reporting
- 8) Data comparison
- 9) Instant communication

And much more...

Figure 28: Representation of a typical Communications Module Screen in the present invention with integrated Travel and Card Data.

FIG. 28 TravelCommander™ is a feature within the current invention which will also be the subject of an additional patent.

This screen shows how the integrated data can be quickly accessed by users of the system in an instant messaging and collaborative interface. As travel is booked, policy exceptions take place, cards are used, approvals are needed, meetings are planned, information is needed, requests are made... this integrated travel and card data is quickly made accessible to the end users in real-time.

User are able to interact in ways they have never dreamed of... facilitating communication, negotiation and collaboration between every party involved throughout the travel and management lifecycle.

Packed with features such as:

- 1) File sharing
- 2) Instant communication with a Travel Counselor
- 3) Web sharing
- 4) Application sharing
- 5) SMS communication
- 6) VoIP
- 7) E-mail
- 8) Chat / instant messaging
- 9) Web Conferencing

This tool shows in detail have the current invention can present the integrated travel and card data in vastly different ways, securing our position as the pioneer and inventors of such powerful and life changing technology.

Key System Components of the Invention

Travel Data Processor

Travel Data Processor system encapsulates all the functionality related to travel bookings data and corporate card data manipulation from all source feeds. It is capable to translate any kind of file to an internal format and it also has the ability to export files with internal data to the other system modules, especially the In-house Connector System - the only way to deal with existent legacy systems. The module has a plug-in interface for heterogeneous data formats.

The entire system has complete flexibility and scalability. The three main subcomponents (Import Mechanism, Processing Mechanism, and XML Mechanism) give the architecture the desired interoperability to the other components of the system.

Processing System

- Processes data for TravelMaster and the information will be refined
- EDI compliant
- XML (SIMS format) compliant
- Provides vendor-dependent implementations
- All storage operations are intermediated by the Data Handler component as the only database access point.
- The use of a single database access point makes the module easy traceable and allows the administrator to create system run reports.

Import System

- Handles the input sources for invoices or other system required information
- Manages the data load process by taking advantages of processing system capabilities
- Multiple data sources (FILE, FTP, HTTP locations).
- Easy extendable for another data source such as EMAIL, depends on customer needs.

XML Extension System

- The double-way access point by allowing the export of the information in XML format or the import of the information from a standard XML format.
- Provides the system with an XML interface
- Makes the system powerful by meaning of using standards
- Creates the capability of interoperability with legacy or third party systems.

Security Manager

The base item is the Permission. A set of permissions will be aggregated in a well-defined Role. System users will be entities as parts of Groups and Roles. The application will filter the requests on a permission basis. Each action of the system has a code assigned and the permission will be the counterpart of a well-defined action. This structure creates a completely flexible solution for user maintenance and application access rights.

The most important part of the module is the Authentication Mechanism that provides an easy way to authenticate users or modules within the architecture.

Manager System

- Provides mechanisms to manage permissions
- Aggregates permissions into roles
- Creates users
- Assign users in groups and roles

Authentication System

- Provides an easier way to authenticate users into the system
- Capability to enable/disable access to a specified action

Log System

There is some key information, except the application data, that have to be stored while an application is running. There are two main categories of events: debugging events and tracing events. The debugging information is used just for text display purposes and is useful for system maintenance. The tracing information is used for administration purposes, giving an administrator/supervisor the chance to inspect the steps taken by the users while using the system. It is also useful for management purposes by providing time & action information regarding specialized staff.

Writer

- Does the write actions
- Supplies the basic target implementations by such as Plaintext HTML and implementation
- Database Writer provides the accessibility to a relational database storage support, that way it provides the reporting system with information for dynamic reports and analysis.

Logger

- Is made up from a debugger and a system logger.
- Debugger stores information for debugging purposes usually in plain text format or HTML. PDF or XML formats can be added easily.
- System Logger (tracer) controls the logging process and messages (multi language support) for administrative purposes rather than maintenance or debugging.

Notification System

The Notification engine is made up by two main components, a synchronous and asynchronous component. The synchronous messenger server is used for real time communication and the asynchronous messenger is designed especially for automatic notifications or e-mail. The second mode does not involve occupied waiting while communicating and is the most suitable in a distributed environment.

It Credit Cards an interface for classic messengers and e-mail. Messages can be of two types, text and binary and the targets can be heterogeneous (different type of messengers, e-mail or directory location destinations).

Notification Message

- Provides two types of messages, text binary and
- The other modules can take advantages of this architecture by sending plain text messages or HTML, PDF, SVG, XML messages

Message Delivery System

- Provides the notification mechanisms in two ways, synchronous and asynchronous

Message Transport System

- Provides the transport mechanisms for various types of destinations
- Can notify the system with messages usually used to be displayed as banners or general interest information
- Provides implementation for e-mail SMS. Notifications or
- Integrates with most used messengers such as ICQ, AOL, MSN Messenger, Netscape, Yahoo and others.

Default & Custom Reports System

The most important part of an application that manages data integration information is the reporting component. The "display data" is a sensible problem in every application. By taking advantages of Velocity, XML, XSL, XSL-FO, SVG it is a key part of the entire architecture. It is all about informing the user about what it is interested into- cost savings, cost migrations, cost estimations, travel bookings, tracking of travelers on the road, policy violations, traveler security, etc., and finally graphic reporting gives the user a more accurate picture of the process. This puts the designated people in connection with the rhythm of the business itself.

Built-in reports

- The reports into the system by default

Dynamic Reports

- Customizable reports based on user search criteria and different output formats.
- Pulled information changes based on user's inputs
- Different output formats (storage purposes) can be generated.

Workflow Manager

The Workflow Manager module holds all the actions and aggregates them as items into a graph. The mathematical model of the module is the State Machine. The workflow controller manages the user steps while working with the application. This is the guide of a well-defined process, this role being to control the input and dispatch the action request. For example, if a user logged in from a web browser and went to some pages, it cannot get back to the previous page by pressing the "back" button into the browser, the only way to get back is to redo the process, if data was processed and closed, the user cannot get back to the original page, modify key values and do different actions to the same data. This prevents unpredictable behavior to happen into web applications.

Layout Manager

The entire interface of the application is based on skins and it will take advantages of Velocity scripting language to implement that. This permits easy customization of the interface, and GUI personalization. The system is easily extensible, just by rewriting the interface generator templates as a replacement for the entire application or just for a

part of it. What creates advantages for an application structured that way is the speed of the interface generation process and the availability to Generate the same content even if the application server that hosts the component is not running. That means the application can easily render the same content without using JSP's or other technologies that depend on the running status of the server.

Plug-in Manager

Some components of the distributed application can work alone and others request the presence of some implemented modules. A customized module, a client new feature module represent this kind of components that have to be manipulated by a manager and all this components are named plug-ins because they support a well defined connectivity interface and permits runtime activation and passivity or even uninstall.

In-house Connector

Many organizations have already implemented some software systems like Accounting Stock or applications. Because this "Legacy Systems" are usually written in programming languages other than Java or even if they are in Java it is a 90% probability to be not conforming to Java Connector API specification, there is a necessity to have interoperability between TravelMaster and legacy systems, this is done by a special state-of-the-art system called an In-house Connector that gives organizations a chance to integrate with existing management software.

License Manager

Every customer support department treats the clients on a license code basis. Treating the customers by their license number improves the business by speeding up the communication and identification process. Also the license management system encapsulates the identification functionality and open or restricts some system key features.

Previously no application has been built with integrates travel data and corporate card data on an itinerary by itinerary basis, highlighting specific data which is critical to the maintenance of a well-run, highly controlled travel program – as well as improving negotiating leverage with travel suppliers.

For instance, prior to the invention, a travel manager might have travel bookings data indicating that 100 room nights had been booked through the travel agency office at a specific hotel property. Further the corporate credit card data available to the travel manager might indicate that 105 room nights had been paid for at the same specific hotel property. However in speaking with the hotel, they might show that there had

been only 38 room nights actually. Previously it would take a great deal of manual investigation to determine (if it were even possible to determine), what had occurred. (For instance one scenario in this situation might be that of the 100 room nights booked through the travel office 62 were cancelled, and those travelers never arrived at the hotel, while 67 other travelers all walked into the hotel unexpected and booked rooms without asking for the corporate rate). Other scenarios are possible as well.

Now, the travel manager will know automatically how many room nights booked through the travel office were actually utilized, how many were cancelled, how many travelers who did not book through the travel office actually stayed at the hotel and what rate they paid, and at the touch of a button will be able to provide the hotel with an automatically generated report which details the traveler's name, dates of arrival and departure at the hotel, invoice number, and total payment made to the hotel

Travel Data Processing and Integration

This is the administrative mechanism that receives and maintains the data associated with the data feed from all Travel booking sources & all Corporate Card data sources, as well as all ancillary travel services providers which may be extending data feeds to the corporation and/or to TravelMaster. Processing and integration will include both recurring and non-recurring expenses.

Validation

The validation function of TravelMaster involves the identification of those variables that do not comply with expected Travel terms and conditions. It is the validation function combined with the audit task that identifies and recoups funds associated with errors and exceptions. Audits also reconcile data with known vendors, users, and contracts to assure enterprises that payments made for services comply with services rendered and corporate policies.

Audit functions include billing assurance, rating and faring assurance, compliance, accuracy, validation, and reconciliation. Historically, as "audits" relate to travel spend companies have performed audits as a "clean-up" effort on an annual or semi-annual basis IF such audits have been performed at all, and in travel, recovery of funds due to prior mis-charging errors has historically been near zero. However, TravelMaster will do automatic dynamic audits on bookings on a real-time basis, and flag any errors of any kind, allowing for correction prior to commencement of travel. As these dynamic audits rely on highly integrated processing systems, they have never been possible previous to recent technical development in the EDI field, and no product has ever been produced that performed such audits on a real-time basis as travel bookings occurred. By applying the TravelMaster technology invention to the error problem, companies can

process many more expenses, corporate card and travel data more quickly today than via manual labor.

Correction

When faring, rating or policy issues fail to comply with contract terms, TravelMaster will flag the error and thereby alert the travel management group within the company to the situation prior to the commencement of travel thereby allowing for correction at the point of sale. Receiving Travel credits or refunds after the commencement of travel is nearly impossible.

Buy

Part of the difficulty in ascertaining Travel spend and contract compliance has been because Travel services are actually contracted first and paid for over a time period – additionally rates at airlines, hotels and rental car companies change with tremendous volatility -- hourly or even by the minute in some cases, previously making the process of determining what rates should be charged under the contract nearly impossible for an individual at the company. As such, the typical “buy” step in the total cost management framework as it relates to corporate travel has historically been virtually impossible to determine on an individual trip by trip basis.

Within companies taking advantage of the TravelMaster solution, there are generally three disbursement models in which the actual payment of travel expenses occurs.

1. The cost of the various travel components is charged on a credit card as the employee travels, and when the employee has returned to their home base, the employee prepares a travel expense report, which the company then reimburses the employee for.
2. The company and the travel services provider have shared access to a clearing account, in which the company transfers the appropriate funds for disbursement by the travel services provider on their behalf
3. The vendor sends the enterprise a single bill for its services, as well as the aggregate Travel service bills. The vendor then pays directly on behalf of the enterprise Therefore; part of the compelling need for our TravelMaster solution is to make sure companies are only paying for what they should, before they make payment.

Accounting Part of the value-add that our TravelMaster solution provides is the integration of the invoice, corporate card and travel data they collect with A/P and the general ledger systems, so key financial data can be efficiently shared within the organization. The TravelMaster process makes appropriate accounting entries on

Travel spend details; and even perform accruals and capital expense accounting.

Chargeback

In this way, TravelMaster allows expenses to be associated within companies to the business unit, group, or unit that used the Travel service. The TravelMaster invention also enables Travel expenses to be charged directly to a user level through direct coding charges to cost centers, or leveraging allocation tables to distribute spend across commonly assumed or actual usage levels.

Analyze

With valid charges paid, Travel managers and finance counterparts' next want to understand the underlying trends and areas of improvement.

Reporting

TravelMaster solutions can flag areas of action that will either improve service quality or lower the overall cost basis of the travel budget. The most effective reporting tools among the TravelMaster solutions are those that present a clear analysis that enables an actionable event. Critical to that process is the prioritization of required actions. Reports that show estimated dollar impact make planning and sourcing decisions that much easier.

No other solution available to corporations today provides a reporting mechanism for enterprises to visualize and analyze the complete aggregate travel spend and integrated corporate card data — across all services, vendors, and business units — to allow simplified decision-making processes. Whether the enterprise or the vendor hosts the TravelMaster solution, a Web-based portal is utilized to access this data, making this invention highly flexible and presents the data in ways never before possible.

TravelMaster Credit Cards:

- “Dashboard” views of key tables or charts on spend and usage or exceptions
- Standard reports on typical spend and usage patterns Customized reports for cross-tabulating particular spend areas or use
- Complete flexible Ad hoc query capabilities

Planning (Proactive and not Reactive)

Armed with this information, enterprises can determine how best to influence necessary changes within their travel program. The TravelMaster invention also automates parts of the optimization process. Optimization planning can impact several points in the Travel service ecosystem:

Travel Services Management

Presents users the opportunity to consolidate underutilized services, and take control of the procurement, implementation and management of these travel services.

Supplier / Vendor Management

Presents users the opportunity to eliminate risk; i.e., via redundant carriers, and ensure contract compliance and enhanced communication between the organizations and their travel suppliers / Vendors.

Contract Management

Presents user with information based on usage patterns, viewing contract terms that may need to be renegotiated, as well as compliance, negotiations, communication and interaction.

User Management

Costs are driven down through proper user training; i.e., Proper understanding of travel services, policies and options. The invention allows companies to customize the environment to maximize productivity and policy adherence.

Sourcing

As most travel services are billed on a recurring basis, original contract and supplier decisions hold true over time, but new services and travel requests continually cycle through a dynamic demand process.

Negotiations

With the built in data and information of common travel contract structures, pricing models, vendor pain points, and SLAs requirements, enterprises can utilize TravelMaster data to negotiate new travel vendor relationships.

Benchmarking

The TravelMaster invention maintains databases of key data sets — typical spending, usage, pricing, etc. — that establish a norm among relevant peer groups. Enterprises can consult such benchmarking data to gain an understanding of how they compare to like-sized companies or similar vertical industries.

Closing Statements

The true nature and reason for this patent is to solidify our vision of the future for the Travel Management workspace. It is not just about delivering another piece of software... it is about creating new and invocative travel technology and data standards that truly empowers organizations to manage their travel costs in ways never before possible.

We are pioneers of new travel management technology and innovations that are “Built to Last”. These technologies and innovations in turn will lead to developing travel services based data integration, management, communication and collaboration environments that are conducive to innovation, learning, community building cost management, policy enforcement and knowledge transfer.

We fully understand that business processes, technology and people will all change... and as they do, so does the shape of how business will be defined. Recent technological innovations such as ours have changed the traditional boundaries for the way companies and individuals do business - thus creating tremendous opportunities for companies like ours to deal with increased outsourcing, complex channel management, and increasingly intimate customer and supplier relationships.

Our current invention provides organizations a means for accurate, real-time integrated corporate card and travel data in a new standard format that provides a solid foundation for a new way of working. For these organizations, the new way of working means moving faster, being more creative and meeting higher expectations. Staying on top of information is vital to success and our challenge is to put substance to the shape of future business, producing solutions that provide real world value, eclipsing the best efforts of others.

Claims

We claim:

1. A Corporate Travel Services Management & Financial Cost data processing system for Travel and/or Credit Cards for clients who wish to integrate Travel booking and Credit Card information from two or more alternative GDS's (Global Distributions Systems), Travel Agencies and Credit Card companies comprising:

At least two alternative travel data systems having different travel and card data information protocols;

data communication means to receive information from each participating alternative GDS's (Global Distributions Systems), Travel Agencies and Credit Card companies to allow receipt of their Travel information in their native protocols;

converter(Parsing) means to convert Travel & Card information of each alternative GDS's (Global Distributions Systems), Travel Agencies and Credit Card company system into a TravelMaster travel & card data information protocol;

Integration means for combining the Travel & Card information from each alternative GDS's (Global Distributions Systems), Travel Agencies and Credit Card company's system data communications means into a single data view;

Means for distributing the resulting combined Travel & Card to clients in the common travel & card information protocol; and

Display means for displaying said integrated travel and card data to clients.

2. The financial data processing system of claim 1 wherein there are means to limit the travel & Card information supplied to any individual client to review information from only those alternative GDS's (Global Distributions Systems), Travel Agencies and Credit Card companies systems of which the client is utilizing.

3. The financial data processing system in accordance with claim 1 wherein at least one electronic exchange, having its native Travel & Card information protocol, participates in said financial data processing system of the present invention and wherein the participating electronic exchanges' Travel & Card book information is integrated with the Travel & Card book information of the alternative trading systems including:

data communications means to receive information from each participating GDS's (Global Distributions Systems), Travel Agencies and Credit Card companies via electronic exchange to allow receipt of its travel & card information in the electronic exchanges' native information protocol;

converter(Parser) means for converting the Travel & Card information from said participating GDS's (Global Distributions Systems), Travel Agencies and Credit Card companies into the common TravelMaster system Travel & Card information protocol; and

Integration means to integrate the Travel & Card information from the alternative trading system with the Travel & Card information from one or more GDS's (Global Distributions Systems), Travel Agencies and Credit Card companies to make a combined Travel & Card data source.

4. The Travel data processing system of claim 3 having means for converting back and forth between the individual alternative Travel & Card systems' electronic exchanges' protocol and a TravelMaster Travel & Card placement protocol thereby allowing clients to Book travel and various other actions, take offers and receive confirmation of executions, in any of the individual alternative Travel Agency, GDS or Credit Card systems.

5. The Travel data processing system of claim 4 wherein the converting means which converts between the individual alternative Travel & Card systems and the TravelMaster protocol allows clients to place Book travel and various other actions, take offers and receive confirmation of execution, takes advantage of all the special Travel & Card entry features of each participating alternate Travel Agency, GDS or Credit Card systems.

6. The Travel data processing system of claim 3 where there are means for filtering out Travel & Card booking and payment information by parameters selected by the client.

7. The Travel & Card data processing system of claim 1 having means for converting back and forth between the individual alternative Travel Agency, GDS or Credit Card systems' Travel & Card placement protocol and a TravelMaster Travel & Card placement protocol thereby allowing clients to place book travel & various other actions, take offers and receive confirmation of executions.

8. The Travel & Card data processing system of claim 1 wherein there is sorting means which organizes the Travel & Card booking and payment information by vendor, by location or sale and then by price, volume or other variables as selected by the client.

9. A data processing method for providing integrated Travel & Card information to clients in application from two or more alternative Travel Agency, GDS or Credit Card systems, comprising the steps of:

receiving Travel & Card booking information from each participating alternative Travel Agency, GDS or Credit Card system in Travel & Card booking & Payment information protocols native to the particular alternative Travel Agency, GDS or Credit Card system;

Converting the information to a TravelMaster Travel & Card booking & Payment data protocol;

Integrating the Travel & Card booking & Payment information from each alternative Travel Agency, GDS or Credit Card system into a single Travel & Card management application;

distributing the combined Travel & Card booking & Payment data to the clients in the TravelMaster Travel & Card booking & payment protocol; and

Displaying said combined Travel & Card booking & payment data to the clients and travelers.

10. The method of claim 9 wherein Travel & Card booking and payment information to any client is limited to only those alternative Travel Agency, GDS or Credit Card systems which the client is a member.
11. The method of claim 9 wherein the Travel & Card booking and Payment of the alternative Travel Agency, GDS or Credit Card systems is integrated with information from one or more electronic data sources (ATDS).
12. The method of claim 11 wherein the information received from an alternative Travel Agency, GDS or Credit Card system and the TravelMaster system are analyzed and the analysis information is used to aid clients in managing their corporate travel programs with the greatest granularity.
13. The method of claim 12 wherein the analysis information is supplied to the client to aid in placing, analyzing, reporting, sharing and interacting with Travel & Card booking and payment data.
14. The method of claim 13 wherein the analysis information automatically controls the policies and management of Travel & Cards.
15. The method of claim 13 wherein the client Books Travel & makes Card payments, takes offers and receives confirmation of execution in a common Travel & Card placement protocol.
16. The method of claim 15, wherein all the special Travel & Card payment entry features of each participating alternative Travel Agency, GDS or Credit Card system is maintained in the TravelMaster Travel & Card placement protocol.
17. The method of claim 11 where the Travel Booking & Card payment information is filtered by parameters selected by the client.
18. The method of claim 11 where the information is integrated from Travel Agency, GDS or Credit Card companies and then filtered and sorted by vendor, by location or sale and then by price, volume or other variables as selected by the client
19. The method of claim 9 wherein Travel & Card booking and Payment information is also supplied from one or more electronic format in their native Travel & Card information protocol which is converted to the TravelMaster protocol and integrated into the combined Travel & Card booking and payment information data set.

ABSTRACT

TravelMaster: A Corporate Travel Management & Cost Consolidation system where each Traveler uses a single terminal to view, and analyze Travel and Credit Card information from and to conduct travel and card transactions with two or more GDS, Travel Agency and by Credit Card Companies or other comparable ATDSs, alone or in combination with one or more types of electronic travel and card data.

The TravelMaster system supplies both Travel and Credit Card information and processes the transactions into a single integrated format. TravelMaster aggregates travel booking information from each participating GDS, Travel Agency and by Credit Card Companies including security, PNR identification, and pricing information. Book Travel and ask prices from participating GDS, Travel Agency and by Credit Card Companies may be integrated into the display. The combined information is displayed to a customer with standard views then sorted by price, volume and other available attributes as desired by the customer. TravelMaster forwards to each Travel & Card Booking and Payment information from only those market GDS, Travel Agency and by Credit Card Companies that the customer is contracted with and thus entitled to receive.

FIGURE 1

Figure 1: How Total Travel Cost Management (TTCM) Works

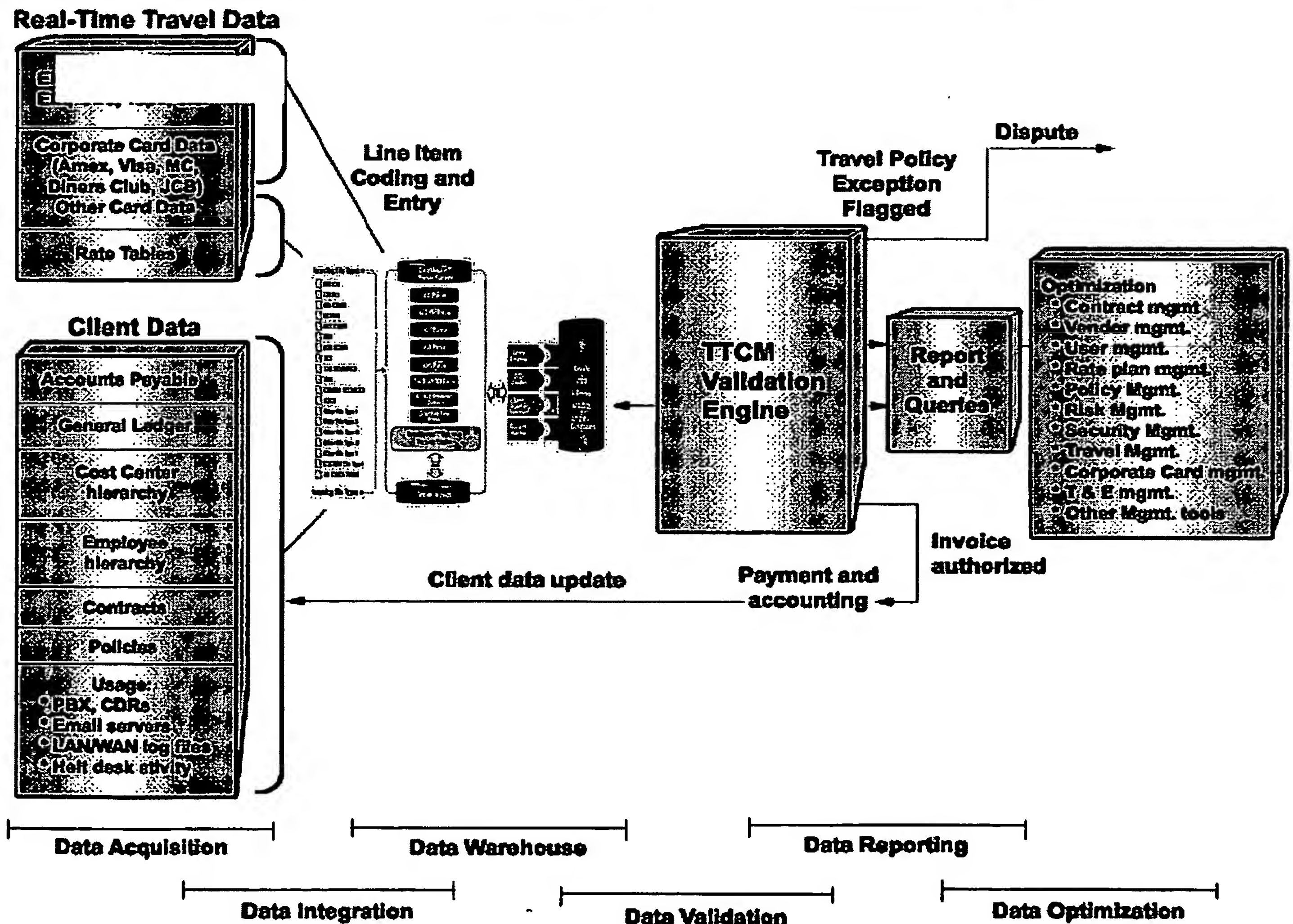


Figure 2

Figure2: Total Travel Cost Management (TTCM) Service Lifecycle

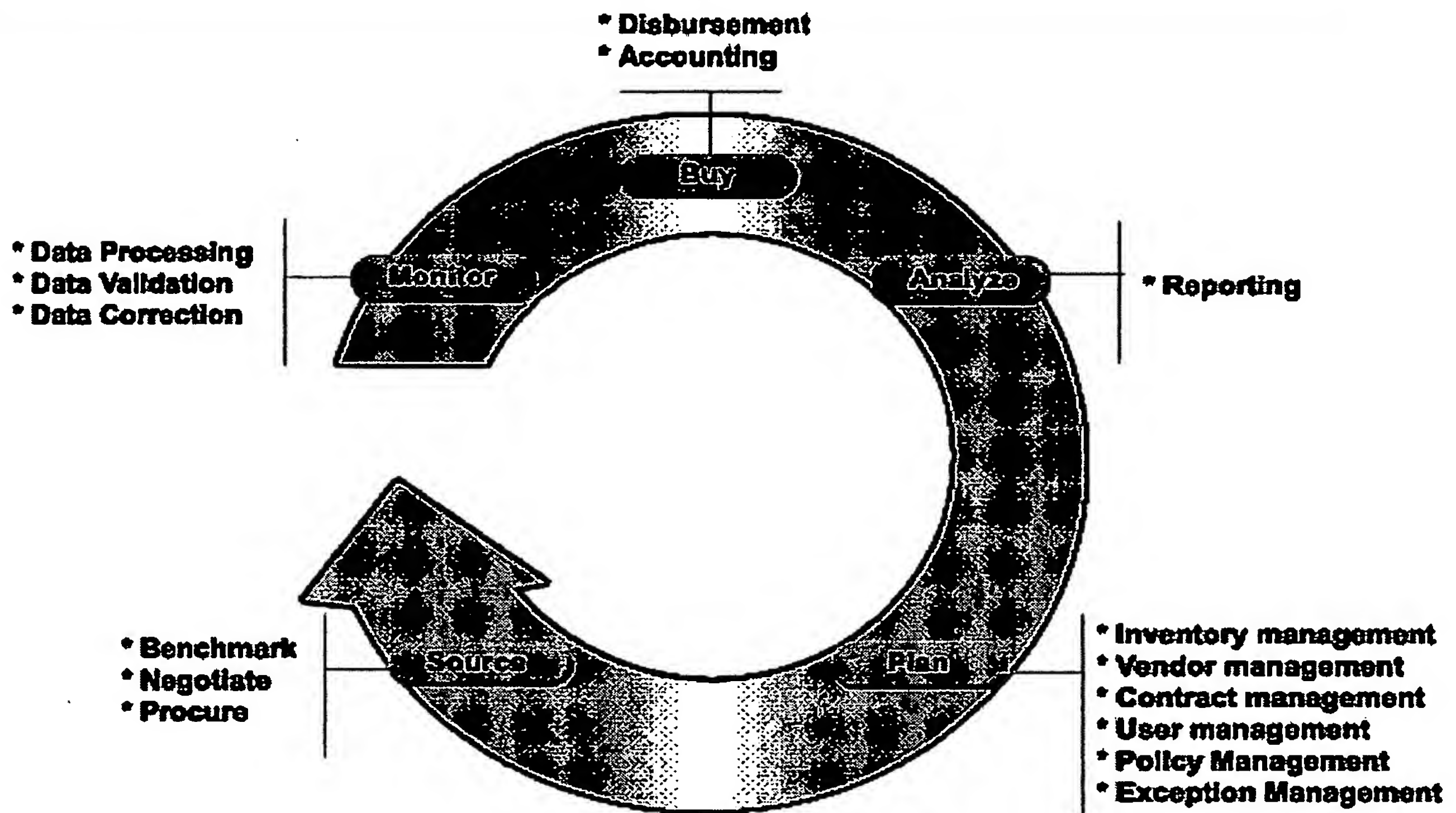


Figure 3

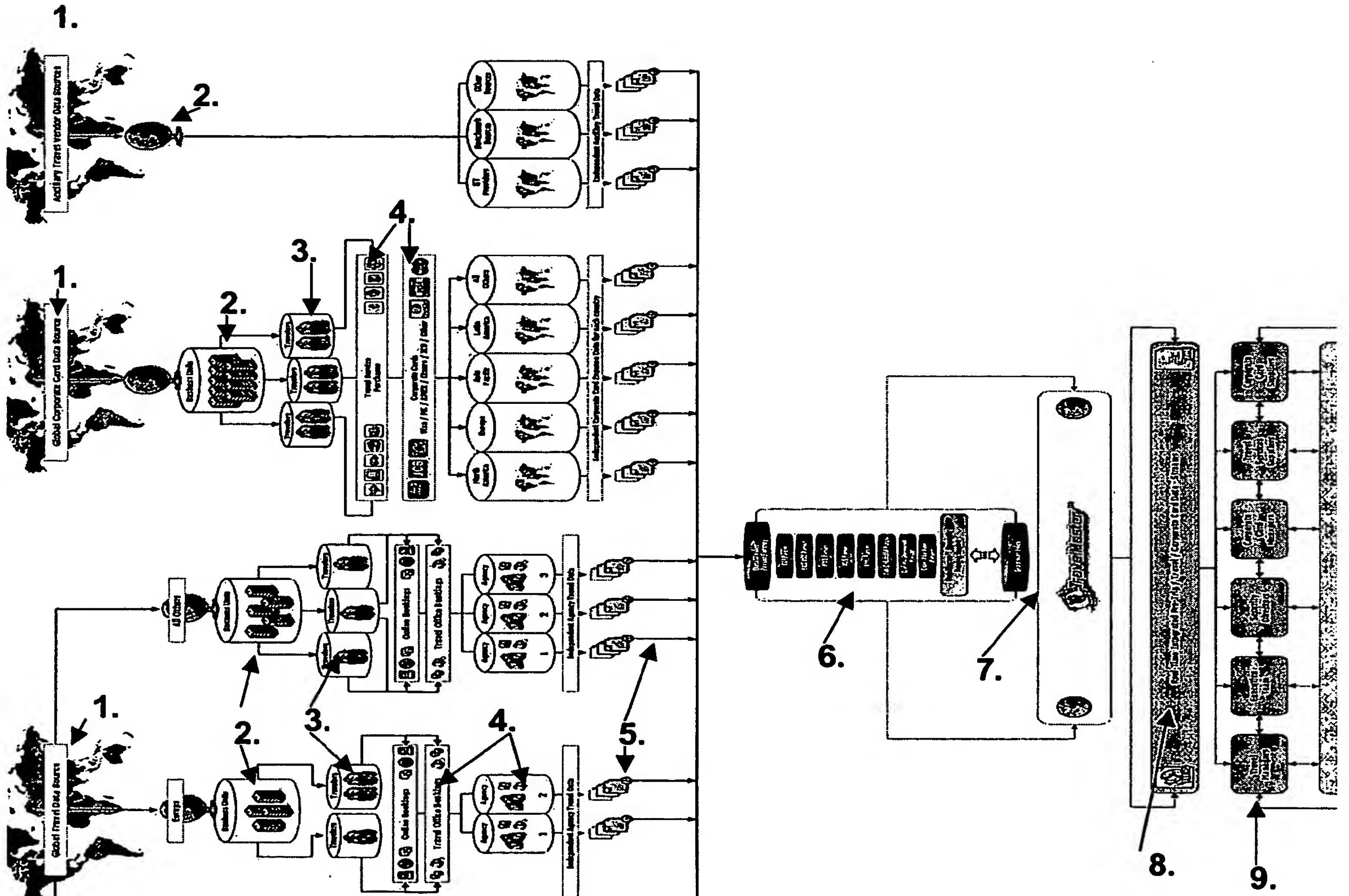


Figure 4

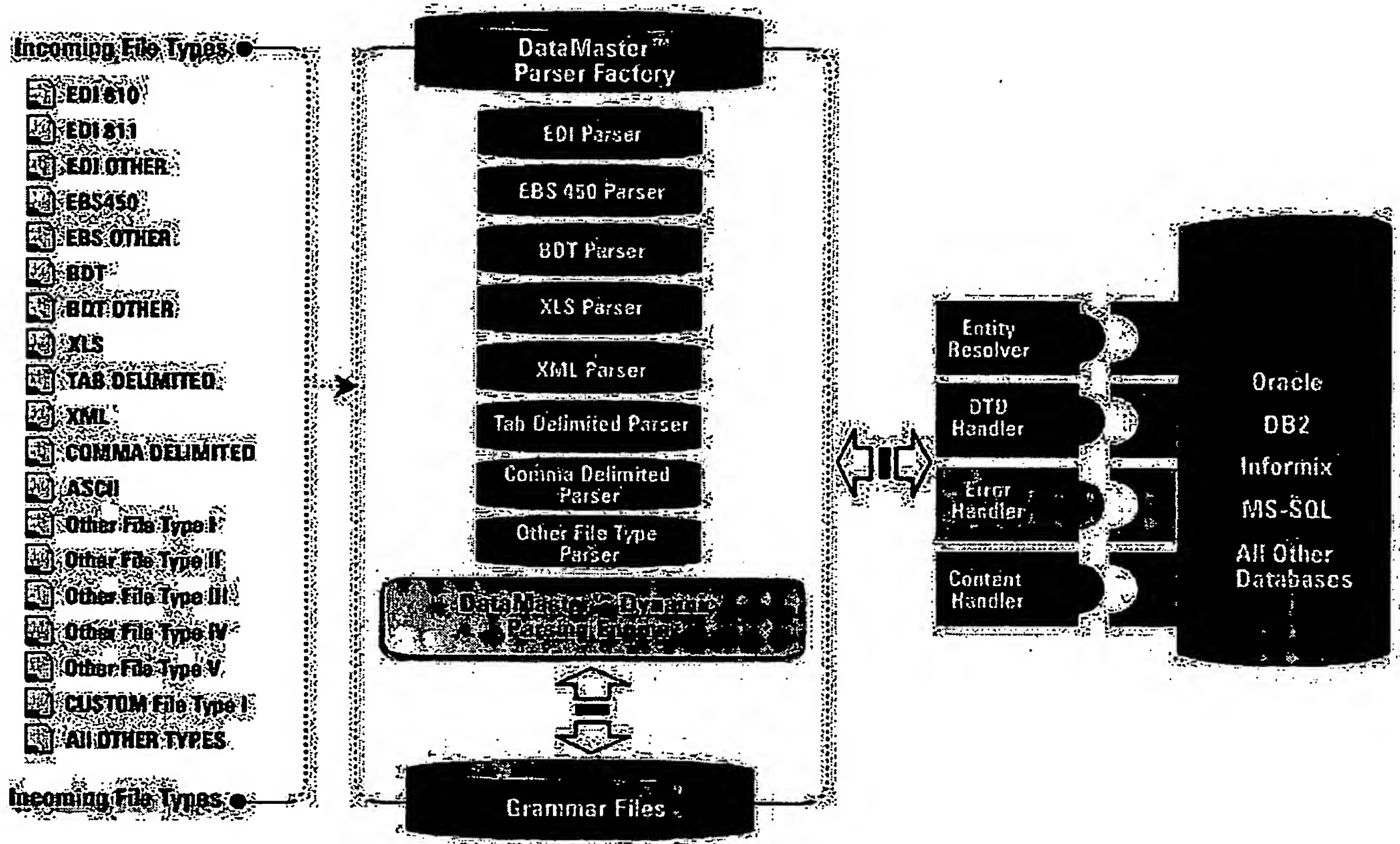


Figure 5

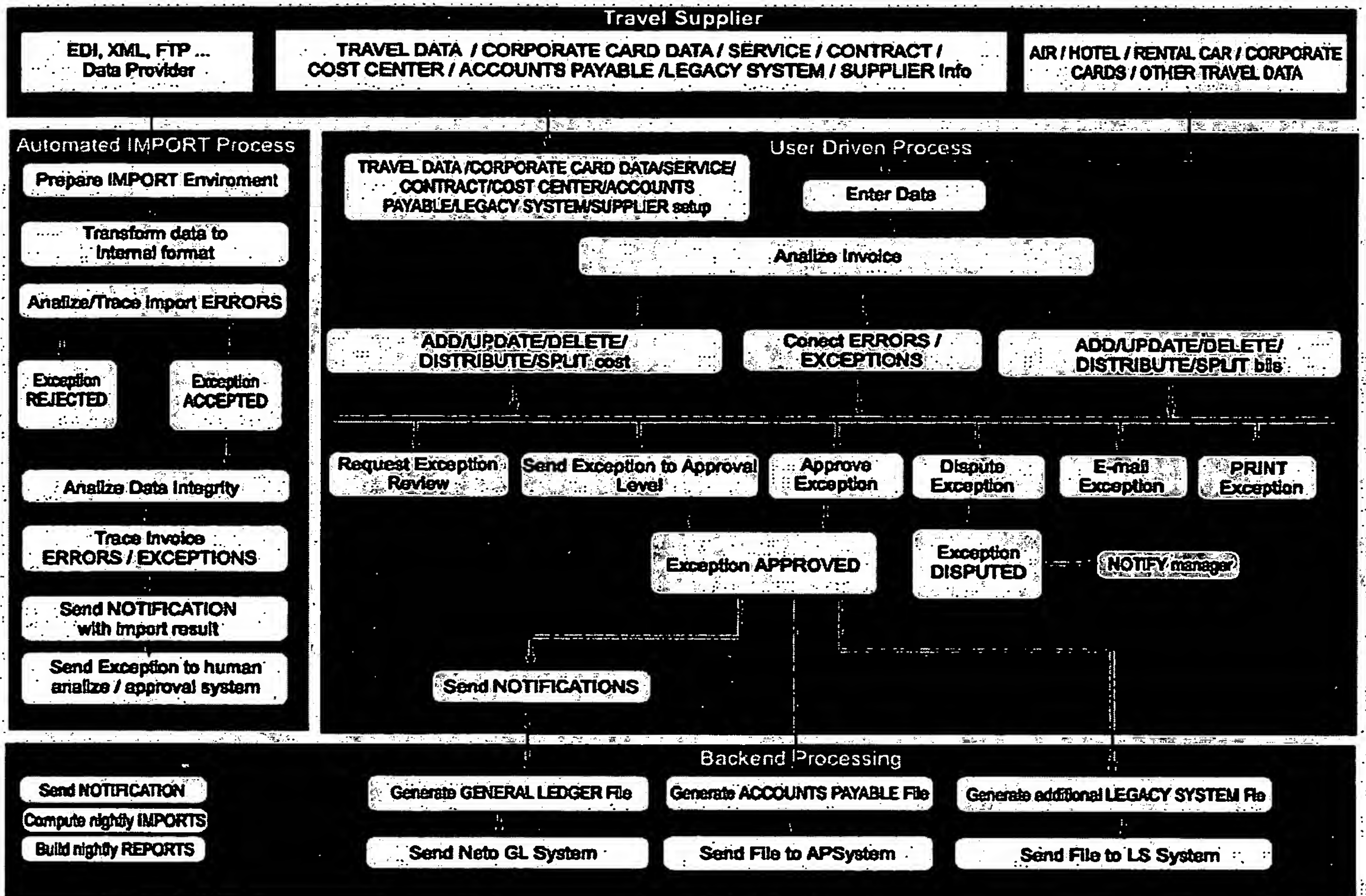


Figure 6

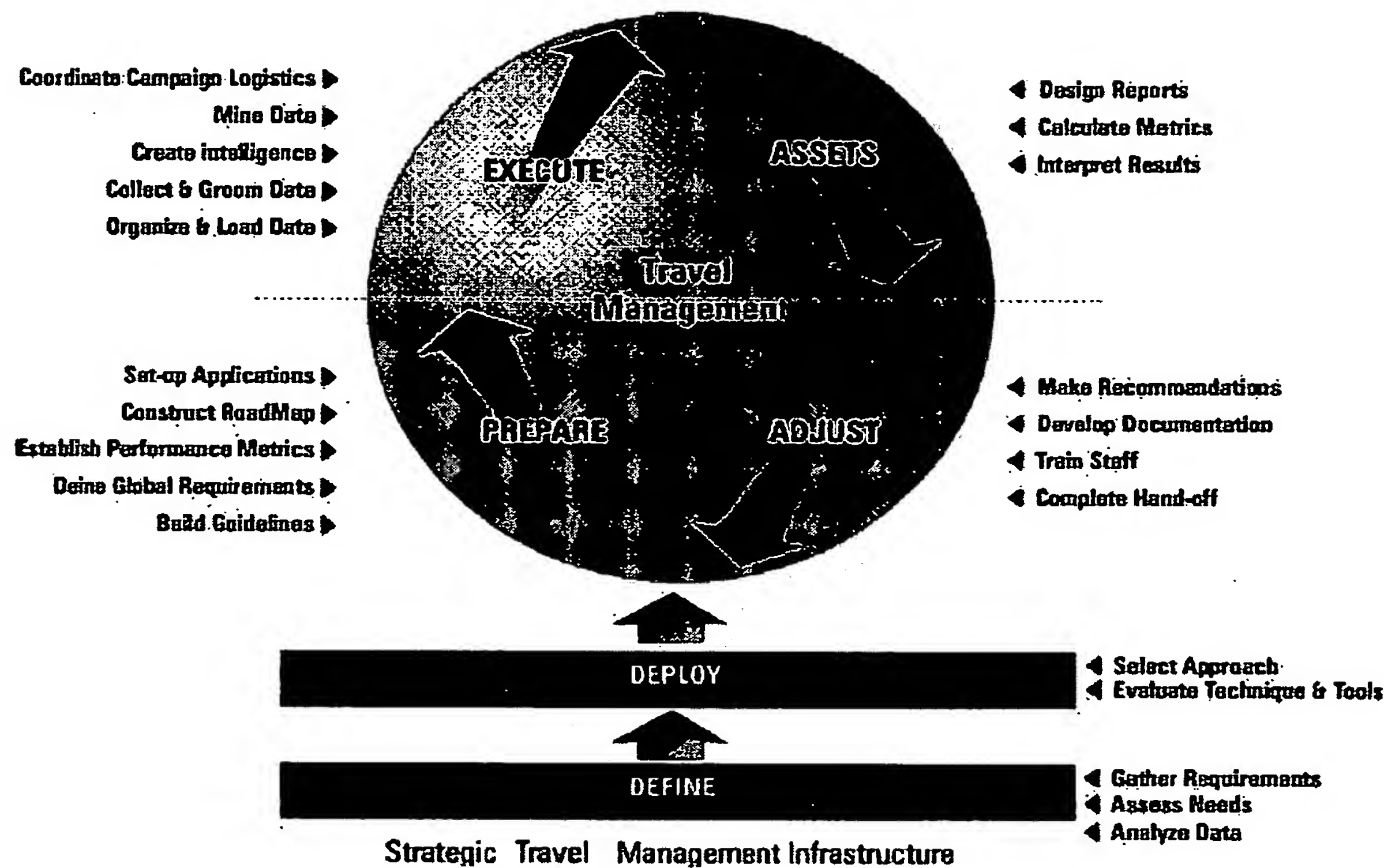


Figure 7

Open Application Architecture

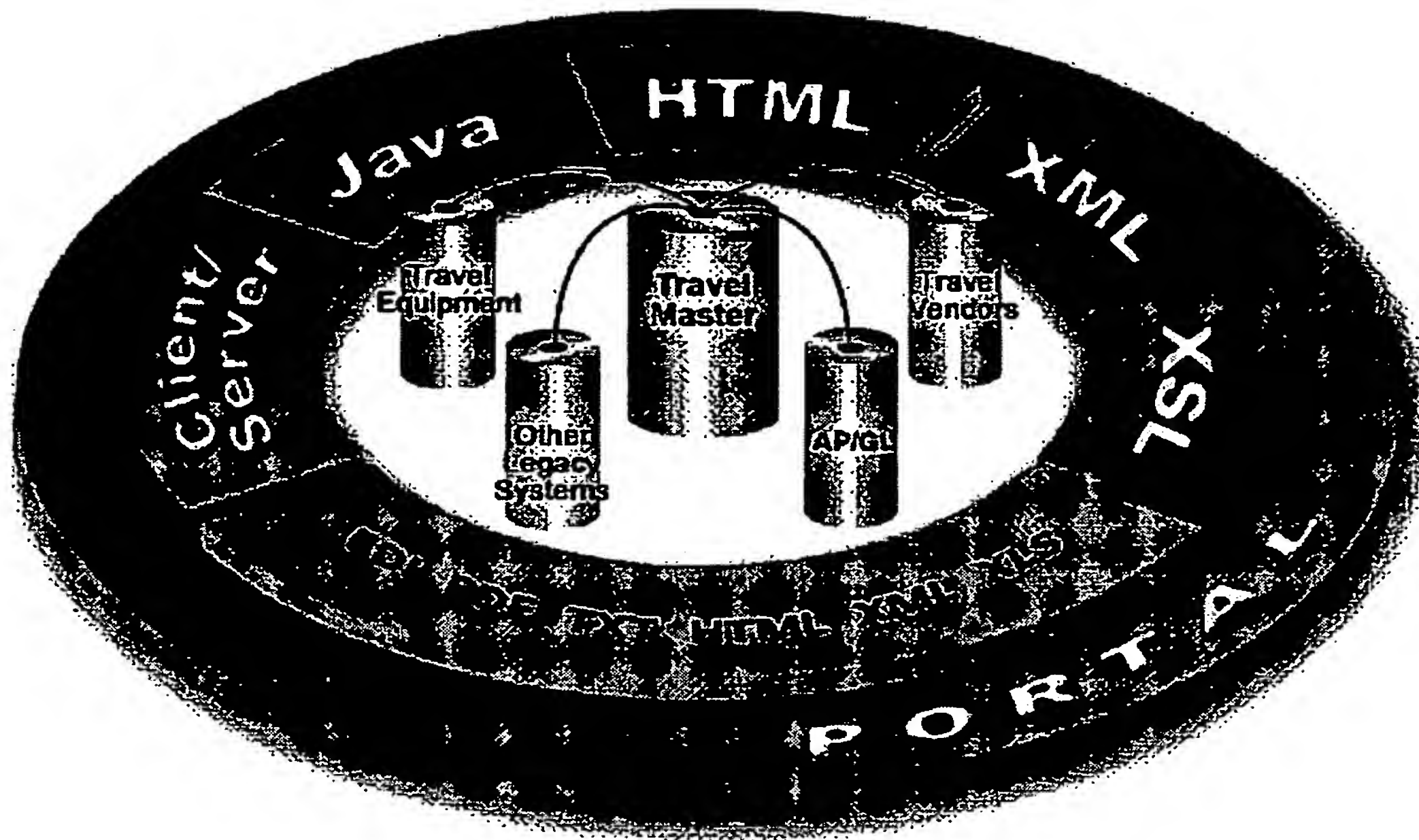


FIGURE 8

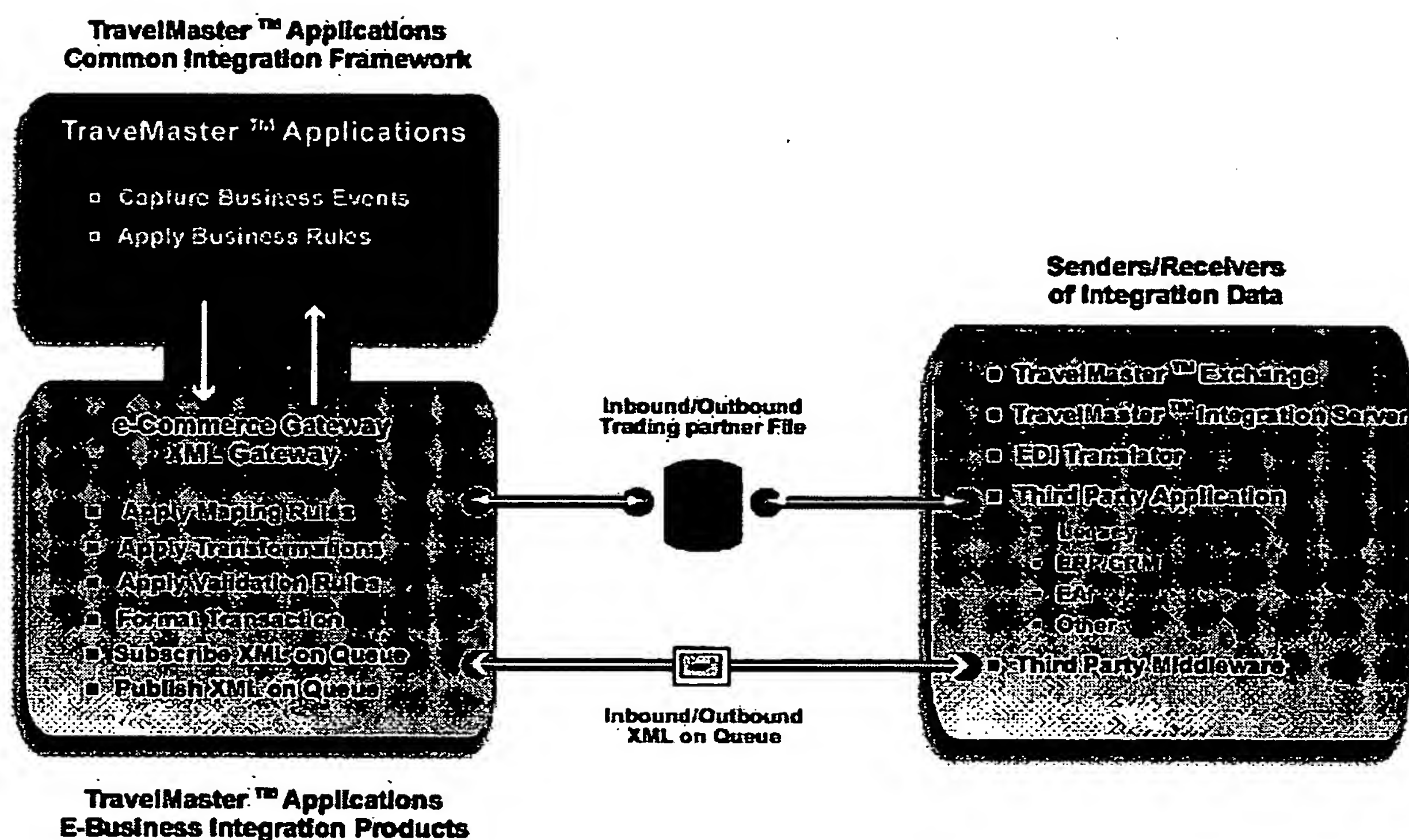


FIGURE 9

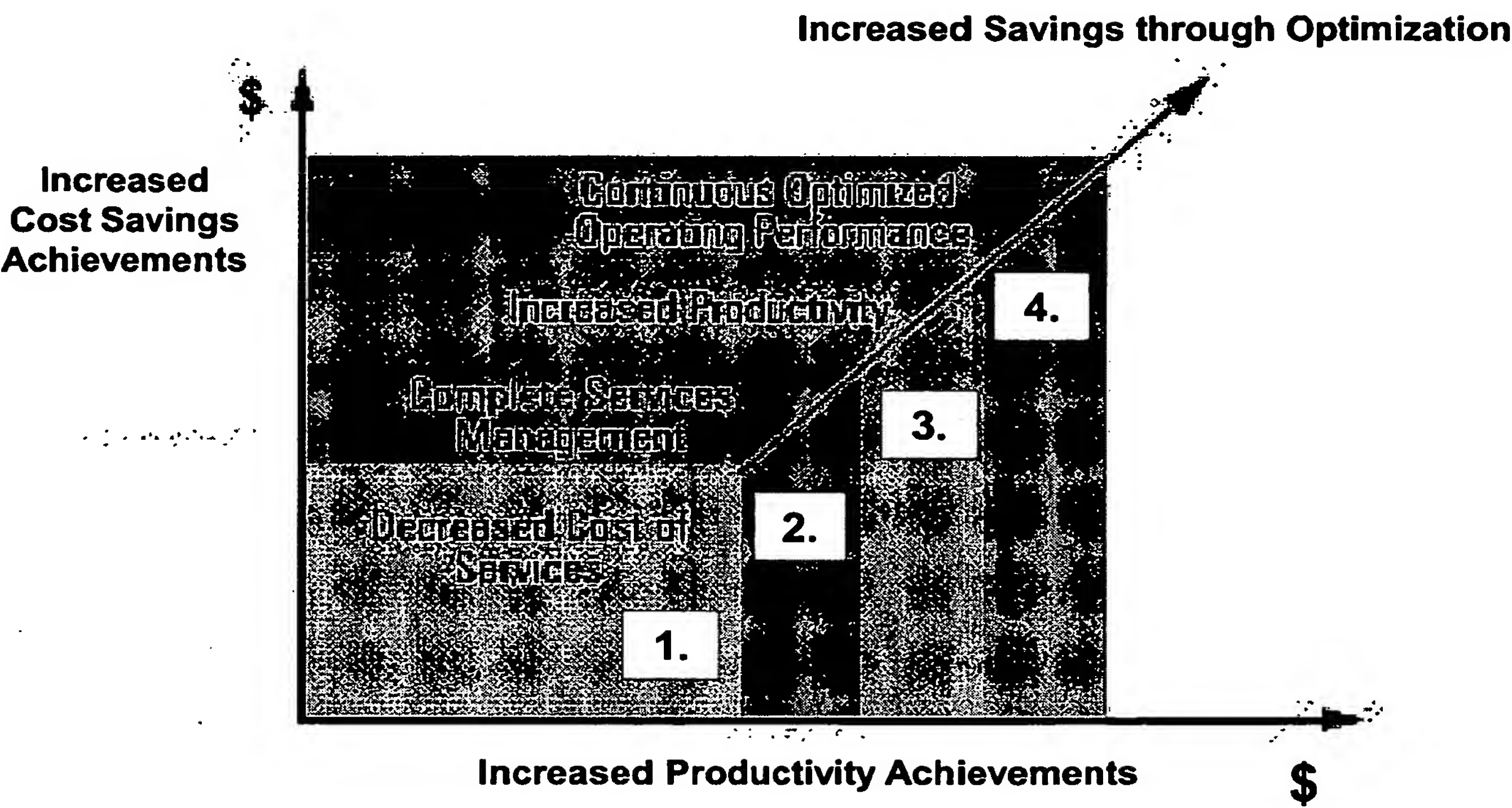


FIGURE 11



FIGURE 12

TravelMaster - Microsoft Internet Explorer

TravelMaster Corporation

MEETINGS AND ACTIVITIES TRAVEL MANAGEMENT PRE TRIP APPROVALS EXPENSE REPORTING POLICY EXCEPTIONS REPORTS

12 12 12 12 12 12

TravelMaster

Pending Travel / Travel in Progress (Real-time Booked vs Actual)

Trips Booked And/Or In Progress - (As of April 23, 2003)

View Summary

Record Locator	Passenger	Depart Date	Routing	Booked On	Return Date	Airline	Hotel	Rental Car	Ticket / Airline Changes	Hotel Utilized	Rental Car Utilized
ACUDD	DILLARD, THOMAS E	22-Jun-03	BOSAAV/SOS	BOSAAV/SOS	24-Jun-03	UNITED (Preferred)	MARRIOTT (AX) (310) 331-0133 (Preferred)	HERTZ (Preferred)	NONE	HOLIDAY INN SAN FRANCISCO (Preferred)	AVIS (Preferred)
FOUVO	CHEN, JAMES	24-Jun-03	BOSAAV/SOS	BOSAAV/SOS	24-Jun-03	UNITED (Preferred)	MARRIOTT SAN FRANCISCO (Preferred)	HERTZ (Preferred)	NONE	MARRIOTT SAN FRANCISCO (Preferred)	SPRINT (Preferred)
GTUOR	DREW, KAREN	25-Jun-03	BWVTRASW	BWVTRASW	28-Jun-03	American	AMERISUITES TAMPA AIRPORT (813) 382-1149 (Preferred)	HERTZ (Preferred)	NONE	NO CHANGE	AVIS (Preferred)
STURIE	CHEN, JAMES	24-Jun-03	BWVTRASW	BWVTRASW	28-Jun-03	American	AMERISUITES TAMPA AIRPORT (813) 382-1149 (Preferred)	HERTZ (Preferred)	NONE	NO CHANGE	SPRINT (Preferred)
EDRUP	SMITH, DEANNA S	15-Jun-03	OCAHSDCA	OCAHSDCA	18-Jun-03	UNITED (Preferred)	HOLIDAY INN HUNTSVILLE (256) 404-0000 (Preferred)	HERTZ (Preferred)	NONE	NO CHANGE	THRIFTY (Preferred)
CHADW	MARLEY, JAMES	15-Jun-03	OCAHSDCA	OCAHSDCA	18-Jun-03	UNITED (Preferred)	CROWNE PLAZA WASHINGTON (202) 462-1100 (Preferred)	HERTZ (Preferred)	AMERICAN AIRLINES (Preferred)	HILTON (Preferred)	HERTZ (Preferred)

1

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Policy Mgmt
Expense Reports
RFP Mgmt
Budgeting
Visas & Passports
CRM Tools

FIGURE 13

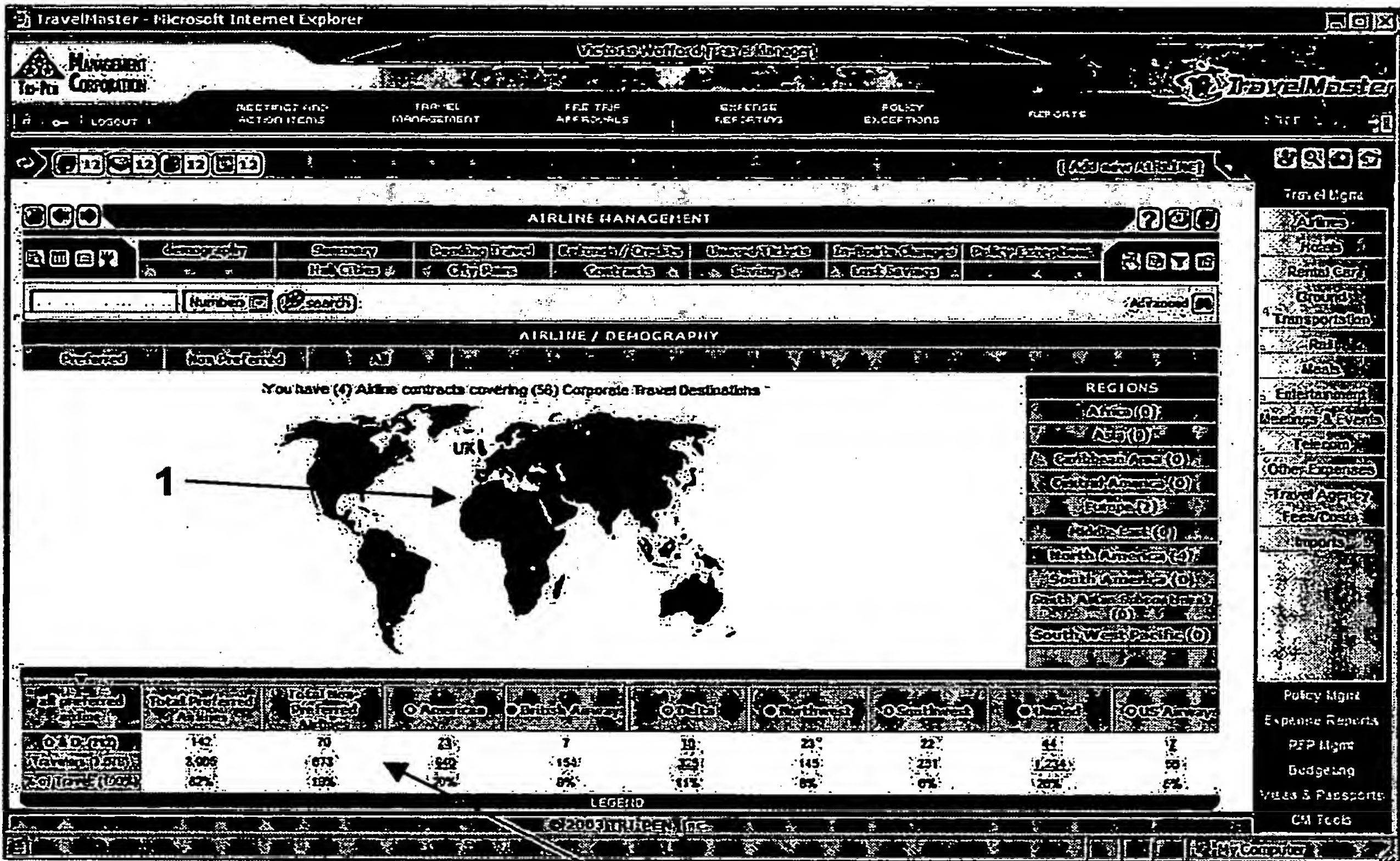


FIGURE 14

TravelMaster - Microsoft Internet Explorer

Management Corporation

TravelMaster

LOGOUT | DETAILED ACTION ITEMS | TRAVEL MANAGEMENT | PRE TRIP APPROVAL | EXPENSE REPORTING | POLICY EXCEPTIONS | REPORTS

PENDING TRAVEL

Filter: [All Business Units] [All Regions] [All Status] [All Cities] [All Locations]

CATEGORY	Business Unit(s)	Total Requested	Total Approved	Total	Estimated Savings	Estimated Lost Savings	Approved Lost Savings	Unapproved Lost Savings
Airfare	2	\$14,134,309 81.65% ↑	\$2,587,800 18.31% ↓	\$2,587,800	\$4,552,377 81.75% ↓	\$373,447 8.25% ↓	\$117,569 42.58% ↓	\$257,889 94.42% ↓
Hotel	195	\$1,227,153 82.18% ↓	\$275,500 17.82% ↓	\$275,500	\$45,837 82.75% ↓	\$157,417 13.00% ↓	\$11,564 98.24% ↓	\$145,853 90.24% ↓
Car Rental	4	\$1,820,309 82.39% ↓	\$320,517 17.61% ↓	\$320,517	\$355,772 84.78% ↓	\$20,228 5.24% ↓	\$2,180 19.50% ↓	\$18,048 86.75% ↓
Ground Transportation	12	\$43,157 89.12% ↓	\$4,550 10.88% ↓	\$4,550	\$772 81.58% ↓	\$1,300 6.42% ↓	\$112 25.2% ↓	\$1,188 75.0% ↓
Meals	15	\$1,181,851 71.93% ↓	\$111,000 28.07% ↓	\$111,000	\$11,425 82.55% ↓	\$17,575 65.45% ↓	\$1,575 18.57% ↓	\$16,000 91.43% ↓
Entertainment	3	\$130,382 26.52% ↓	\$14,221 11.02% ↓	\$14,221	\$17,002 94.0% ↓	\$1,020 1.60% ↓	\$383 19.10% ↓	\$2,120 81.64% ↓
Meetings & Events	21	\$7,253,651 72.36% ↓	\$2,527,411 22.64% ↓	\$2,527,411	\$2,516,650 94.15% ↓	\$10,761 0.27% ↓	\$28,125 12.20% ↓	\$81,286 12.57% ↓
Per Diem	9	\$39,552 88.87% ↓	\$4,450 11.13% ↓	\$4,450	\$2,772 51.94% ↓	\$1,678 6.02% ↓	\$112 25% ↓	\$1,566 75% ↓
Travel Agency Fees	10	\$241,187 91.50% ↓	\$19,548 8.50% ↓	\$19,548	\$21,015 81.34% ↓	\$1,320 6.00% ↓	\$383 29.87% ↓	\$3,421 71.13% ↓
Totals	264	\$18,612,311 81.65% ↓	\$3,566,646 19.35% ↓	\$3,566,646	\$4,948,363 81.65% ↓	\$511,183 10.12% ↓	\$131,589 25.87% ↓	\$379,594 74.13% ↓

LEGEND

2003 YEAR ENDING

Travel Mgmt
Areas
Policies
Request Card
Ground Transportation
Hotel
Meals
Entertainment
Meetings & Events
Telecom
Other Expenses
Travel Agency
Fees/Coms
Invoices
Policy Mgmt
Expense Reports
RFP Mgmt
Budgeting
Visas & Passports
CRM Tools

FIGURE 15

TravelMaster - Microsoft Internet Explorer

TravelMaster Corporation

TravelMaster

Home | My Profile | My Travel | My Expenses | My Policy | My Reports

POLICY EXCEPTIONS

Filter: All Business Units | All Airlines | All Dates

Traveler	Destination	Airline	Travel Date	Return Date	Days	Class	Fare Paid	Original Fare	Class Change	Reason Code
William Adams	New York, NY	DEWAD-DEN	Friday, Aug 22, 2003	Wednesday, Aug 27, 2003	5 Days	Y	\$410.00	\$400.00	\$10.00	1
William Adams	London, UK	ORD-LHR	Monday, Sep 15, 2003	Friday, Sep 19, 2003	4 Days	Y	\$710.00	\$700.00	\$10.00	1
William Adams	London, UK	ORD-LHR	Friday, Sep 12, 2003	Friday, Sep 19, 2003	7 Days	Y	\$750.00	\$740.00	\$10.00	1
Totals										

Reason Code (APR-011)

1. Descriptive Connection flight would make traveler late for client meeting.

2. Approval REQUIRED for this reason code. Any traveler giving this reason code for out of policy travel... must obtain final approval from at least (1) authorized manager.

FIGURE 16

TravelMaster - Microsoft Internet Explorer

Navigation
TravelMaster

MEETINGS AND ACTION ITEMS TRAVEL MANAGEMENT PRE TRIP APPROVALS EXPENSE REPORTING POLICY EXCEPTIONS REPORTS

EXPENSE REPORT MANAGEMENT

Filters: All Business Units All Regions All Status All Cities All Cents

EXPENSE REPORT / SUMMARY

Report Categories	Total TRIP	Total Approved Amount	Employee Reporting	Total Reports	Total Expenses	Total Company Expenses
<input checked="" type="checkbox"/> All	2,355	2,355	701	2,355	\$1,043,370	\$1,043,370
<input type="checkbox"/> Airfare	75	12	12	102	\$3,555.17	\$3,555.17
<input type="checkbox"/> Auto	2	5	5	22	\$24.00	\$24.00
<input type="checkbox"/> Business Auto	215	17	17	112	\$2,403.00	\$423.00
<input type="checkbox"/> Lodging	23	10	10	60	\$2,212.00	\$2,212.00
<input type="checkbox"/> Telephone Service	43	9	9	33	\$50.22	\$112.22
<input type="checkbox"/> Travel Agent	13	22	22	10	\$1,000.00	\$1,000.00
<input checked="" type="checkbox"/> Total	2,355	220	870	2,240	\$3,600.60	\$3,600.60
<input type="checkbox"/> None	1,043	22	22	240	\$1,043.54	\$70,129
<input type="checkbox"/> Travel Agent	10,170	372	372	2,003	\$3,210,973	\$3,210,973
<input type="checkbox"/> Total (All)	350	104	104	100	\$1,100,701	\$210,200
<input type="checkbox"/> Breakfast (All)	12	10	10	10	\$210,320	\$12,450
<input type="checkbox"/> Dinner (All)	21	10	10	10	\$210,320	\$12,450
<input type="checkbox"/> Lunch (All)	20	104	104	20	\$407,211	\$72,110
<input type="checkbox"/> Snacks / Other (All)	13	39	39	20	\$100,000	\$30,110

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FIGURE 17

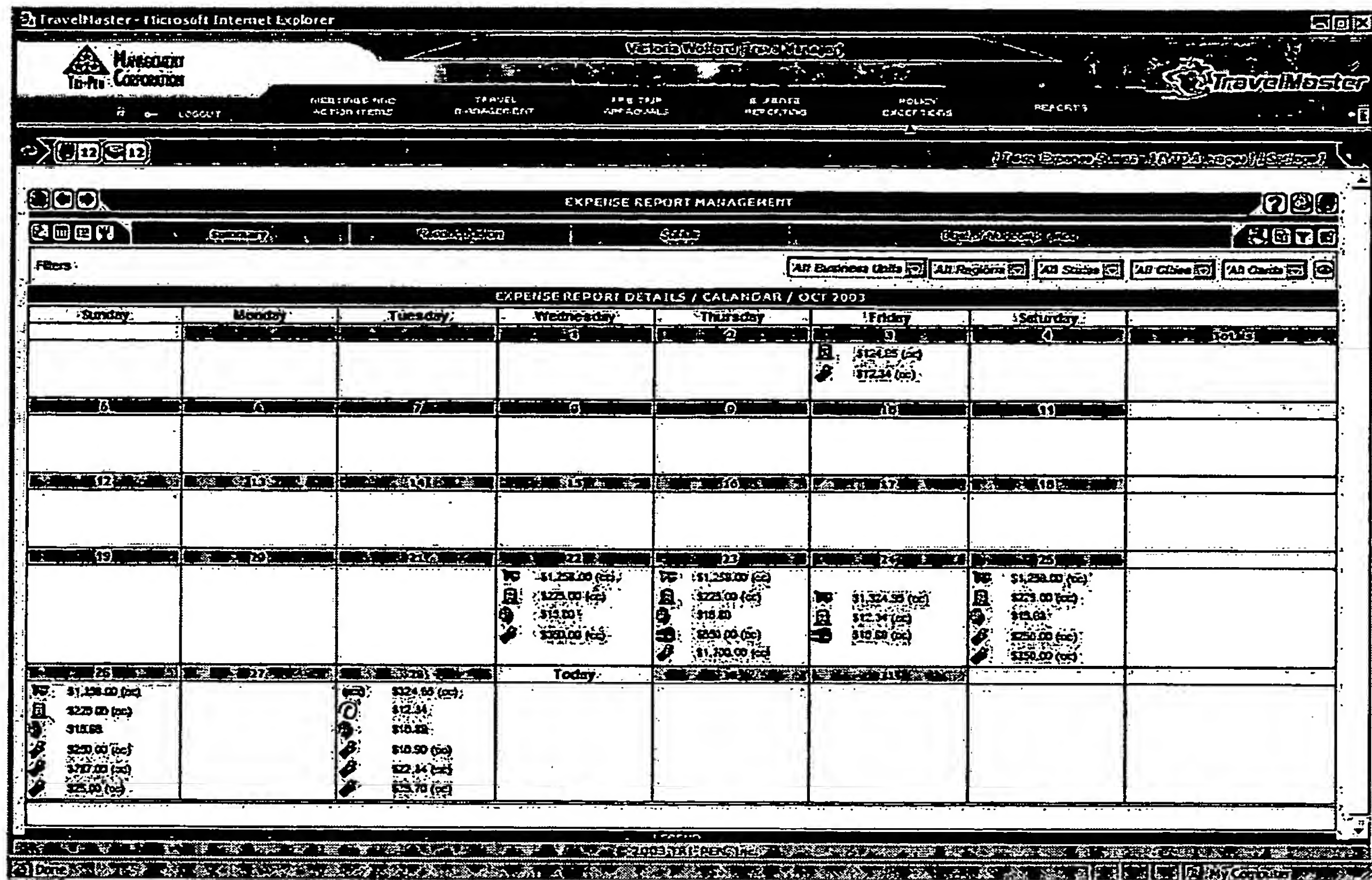


FIGURE 18

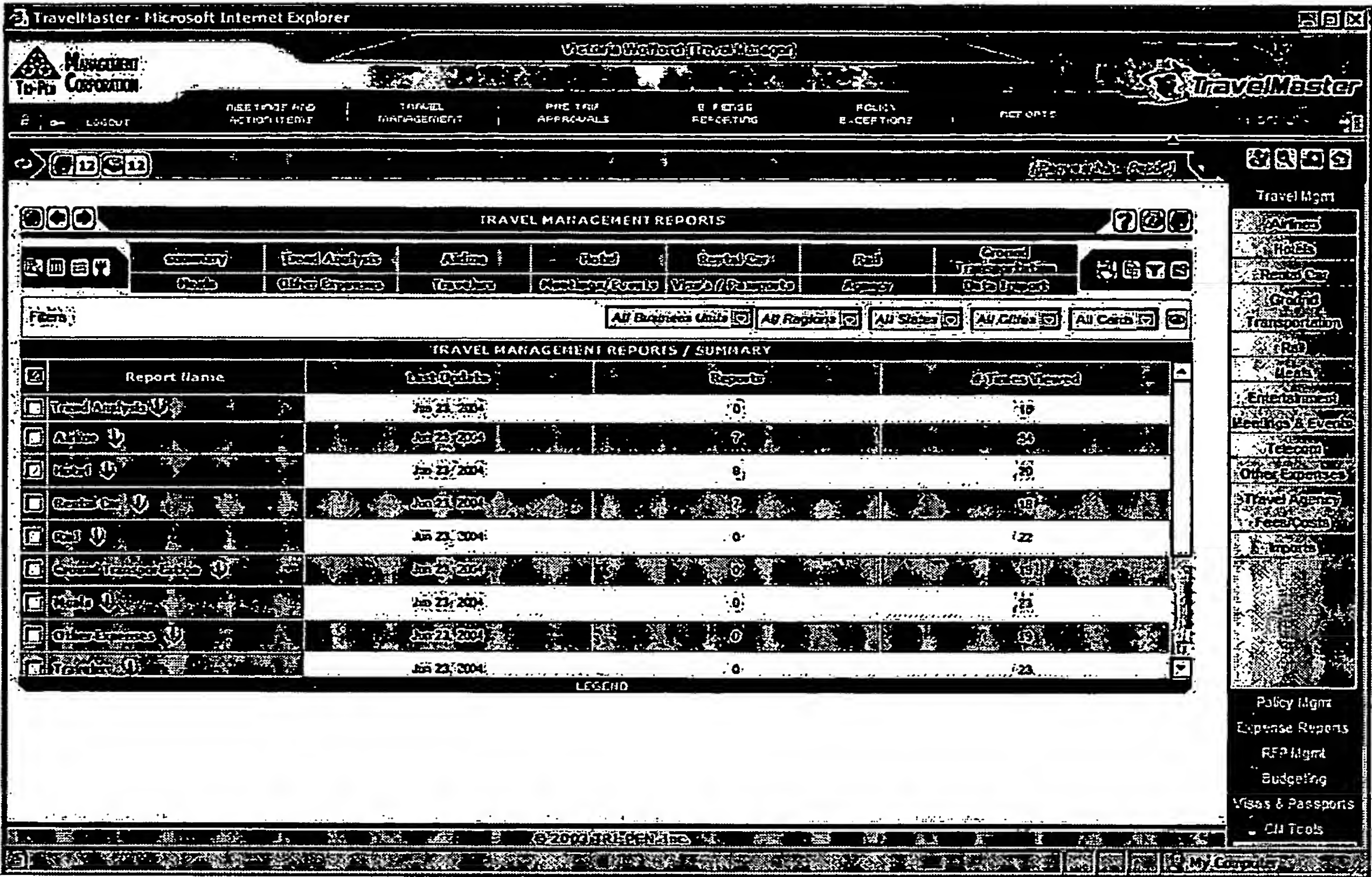


FIGURE 19



FIGURE 20

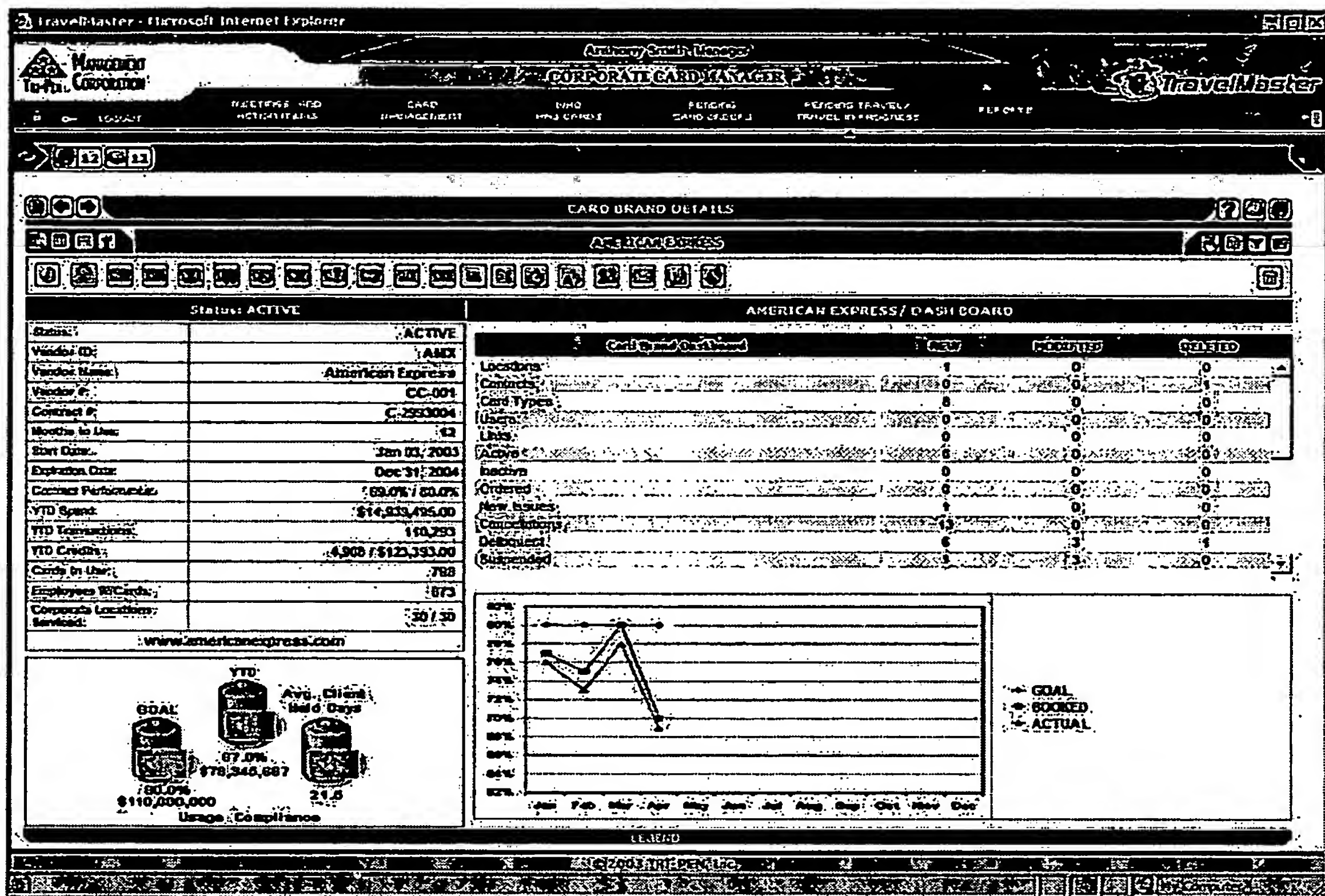


FIGURE 21

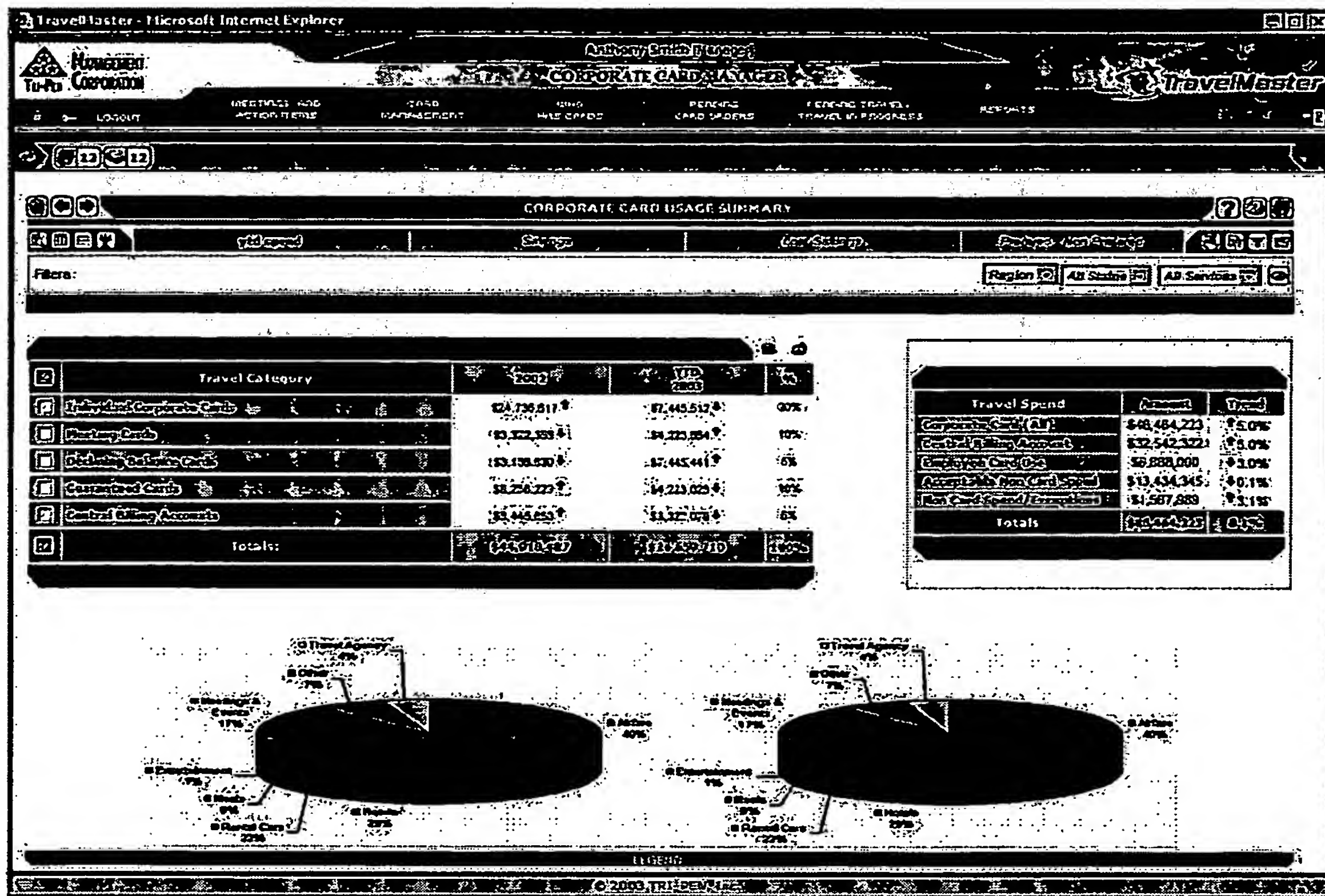


FIGURE 22

TravelMaster - Microsoft Internet Explorer

TravelMaster
To-Go Corporation

Anthony Smith, Manager

CORPORATE CARD MANAGER

TravelMaster

MEETING AND
ACTIVITIES

CARD
MANAGEMENT

NEW
CARD

PENDING
CARD CANCELS

PENDING TRAVEL
TRAVEL IN PROGRESS

GENERATE

LOGOUT

12 12 12

CORPORATE TRAVEL CARD SUMMARY

12 12 12

Card Summary		CARD (CARD NO. 3723 334747 1123)		CARD USAGE SUMMARY	
STATUS: ACTIVE		FUND		Scheduled 2003 YTD	
Card:	3723 334747 1123	Trans Date	Post Date	Type	Amount
Issuer:	American Express	1/22/2004	1/22/2004	ENTERPRISE RENT CAR (TAXI)	\$105.83
Profit Center:	PC-35945	1/22/2004	1/22/2004	INTERCONTINENTAL (TAXI)	\$21.00
Months in use:	12	1/22/2004	1/22/2004	LUXOR HOTEL/CASINO (TAXI)	\$145.21
Credit Limit:	\$10,000.00	1/22/2004	1/22/2004	LUXOR HOTEL/CASINO (TAXI)	\$145.21
Primary User:	Travel	1/22/2004	1/22/2004	PAYMENT - THANK YOU (TAXI)	\$382.00
Term:	Net 30	1/22/2004	1/22/2004	LUXOR HOTEL/CASINO (TAXI)	\$145.21
Employment:	TP-650008	1/22/2004	1/22/2004	LUXOR HOTEL/CASINO (TAXI)	\$145.21
Issue Date:	Jan 03, 2003	1/22/2004	1/22/2004	LUXOR HOTEL/CASINO (TAXI)	\$145.21
Expiration Date:	Feb 07, 2003	1/22/2004	1/22/2004	LUXOR HOTEL/CASINO (TAXI)	\$145.21
GLP:	GL0038984	1/22/2004	1/22/2004	LUXOR HOTEL/CASINO (TAXI)	\$145.21
Issued to:	Brenda Smith	1/22/2004	1/22/2004	LUXOR HOTEL/CASINO (TAXI)	\$145.21
Phone:	(704) 222-3030	1/22/2004	1/22/2004	LUXOR HOTEL/CASINO (TAXI)	\$145.21
Division:	Division IA	1/22/2004	1/22/2004	LUXOR HOTEL/CASINO (TAXI)	\$145.21
Less Invoiced:	\$4,892.00	1/22/2004	1/22/2004	LUXOR HOTEL/CASINO (TAXI)	\$145.21
Liability: Personal or Corporate:		1/22/2004	1/22/2004	LUXOR HOTEL/CASINO (TAXI)	\$145.21
Totals:					

6 Days
PAST DUE
Please Pay Balance

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FIGURE 23

TravelMaster - Microsoft Internet Explorer			
CORPORATE CARD REPORTS			
Report Name	Current Period	All Card Companies	All Card Types
DATE RANGE			
CORPORATE CARD REPORTS / SUMMARY BY INDUSTRY			
Report Name	Last Update	Reports	When Mined
Corporate Card Summary	Jan 21, 2004	10	0
Air Booking Source Utilization Report	Jan 21, 2004	0	23
Delinquency History Report	Jan 21, 2004	18	12
Industry Spending Summary	Jan 21, 2004	0	20
International Summary Report	Jan 21, 2004	4	7
International Spending Summary Top 8	Jan 21, 2004	5	15
International Spending Summary	Jan 21, 2004	14	6
Airline Credit Report	Jan 21, 2004	0	9
Airline Spending Summary	Jan 21, 2004	0	10
Total Traffic Report by Segment	Jan 21, 2004	0	5
Air Booking Index Report	Jan 21, 2004	1	0
Credit Card Activity Report	Jan 21, 2004	0	0
Credit Card Billing	Jan 21, 2004	0	0
Credit Card Spending Summary	Jan 21, 2004	0	0
Hotel Spending Summary	Jan 21, 2004	0	0
Monthly Unmined Data Collection	Jan 21, 2004	0	0
Corporate Expense City Utilization Chart	Jan 21, 2004	0	14
Corporate Expense City Utilization Chart	Jan 21, 2004	0	0
Restaurant Spend Analysis Top 2 Cities	Jan 21, 2004	0	0
Spending Analysis Chart	Jan 21, 2004	0	0
Total Traffic Summary By Country	Jan 21, 2004	7	12
Totals			
LEGEND			

FIGURE 24

TravelMaster

MANAGEMENT CONSOLE

Logout

Victoria Wolford (administrator)

1. CATEGORY MANAGEMENT

2. USER TYPES (ROLES)

3. USER MANAGEMENT

4. COMMUNITY MANAGEMENT

USER MANAGEMENT

Users Listing

add user

Filter

User name

User role

Role1

Company

L3Comm

















Name	Roles	Last login	City/State	Phone	Email	Controls
User1	L3 Comm Role1 Local Role2 Tri-Pen Role3	June 23, 2004	New York, NY	(509) 555-1212	user1@user1.com	 
User2	L3 Comm Role1 Local Role2 Tri-Pen Role3	June 23, 2004	Memphis, TN	(509) 555-1212	user1@user1.com	 
User3	L3 Comm Role1 Tri-Pen Role3	June 23, 2004	Los Angeles, CA	(509) 555-1212	user1@user1.com	 
User4	L3 Comm Role1	June 23, 2004	New York, NY	(509) 555-1212	user1@user1.com	 
User5	Tri-Pen Role3	June 23, 2004	Memphis, TN	(509) 555-1212	user1@user1.com	 
User6	Tri-Pen Role3	June 23, 2004	Los Angeles, CA	(509) 555-1212	user1@user1.com	 
User1	Tri-Pen Role3	June 23, 2004	Memphis, TN	(509) 555-1212	user1@user1.com	 
User1	Tri-Pen Role3	June 23, 2004	Los Angeles, CA	(509) 555-1212	user1@user1.com	 

FIGURE 25

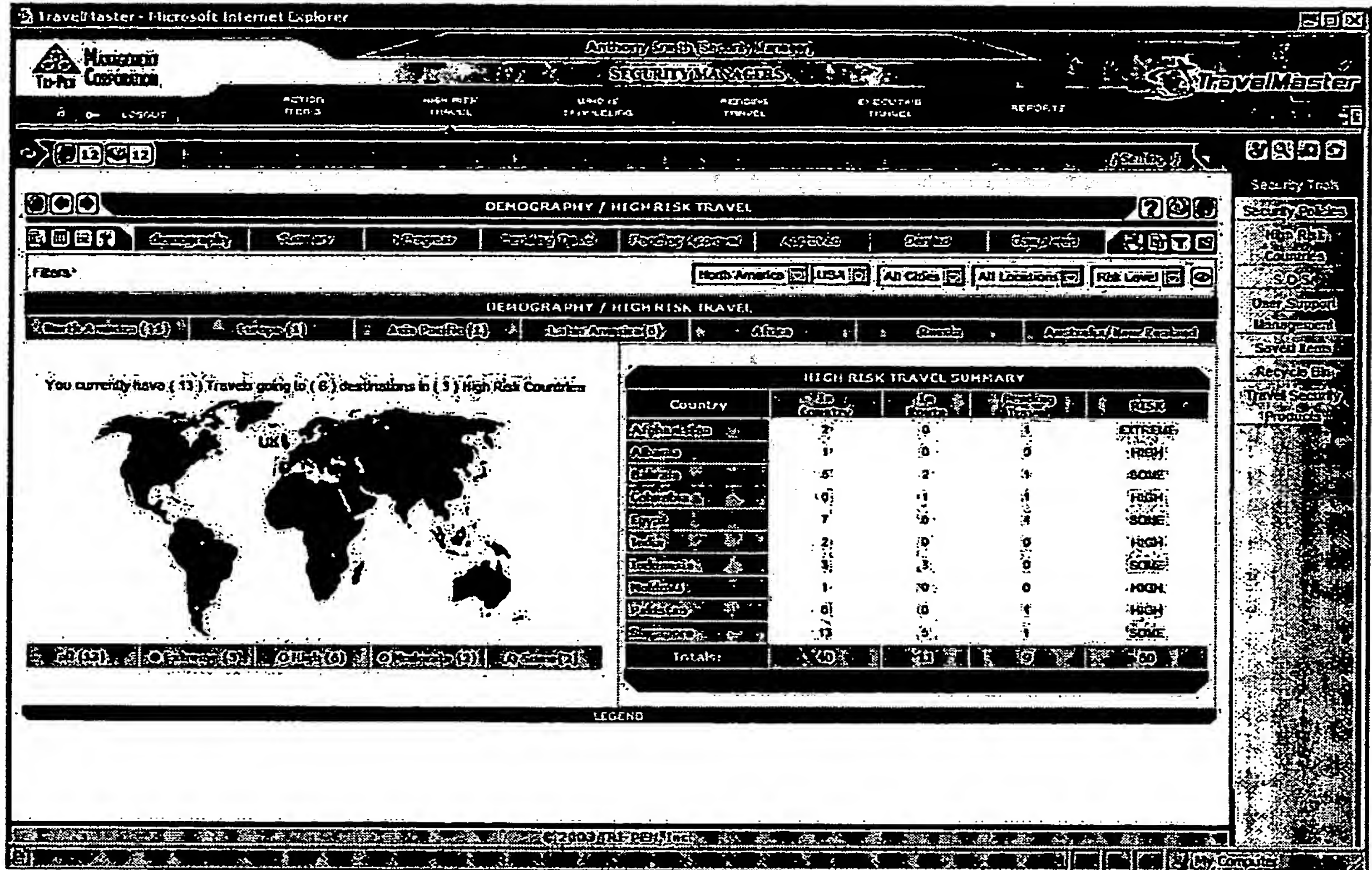


FIGURE 26

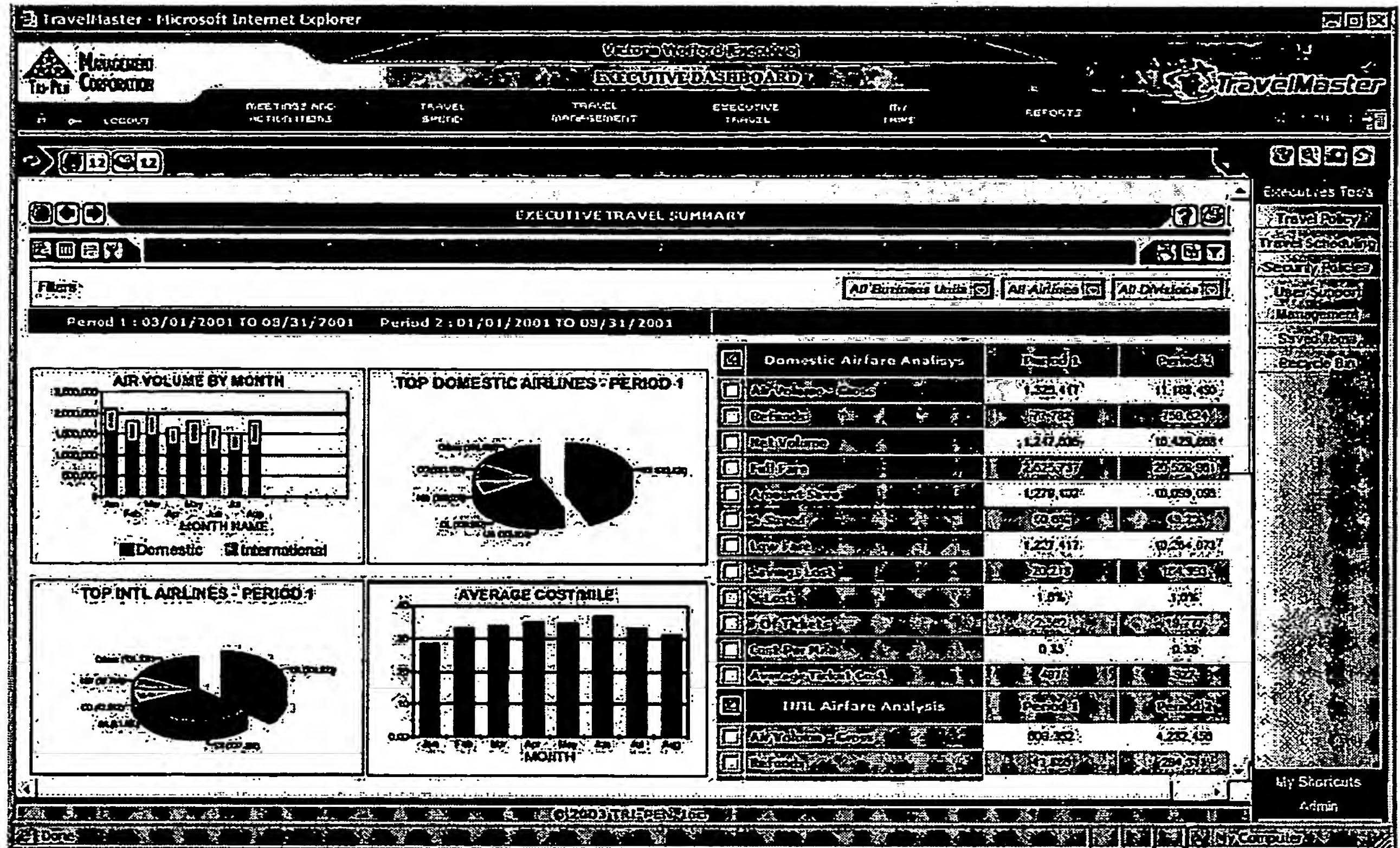


FIGURE 27

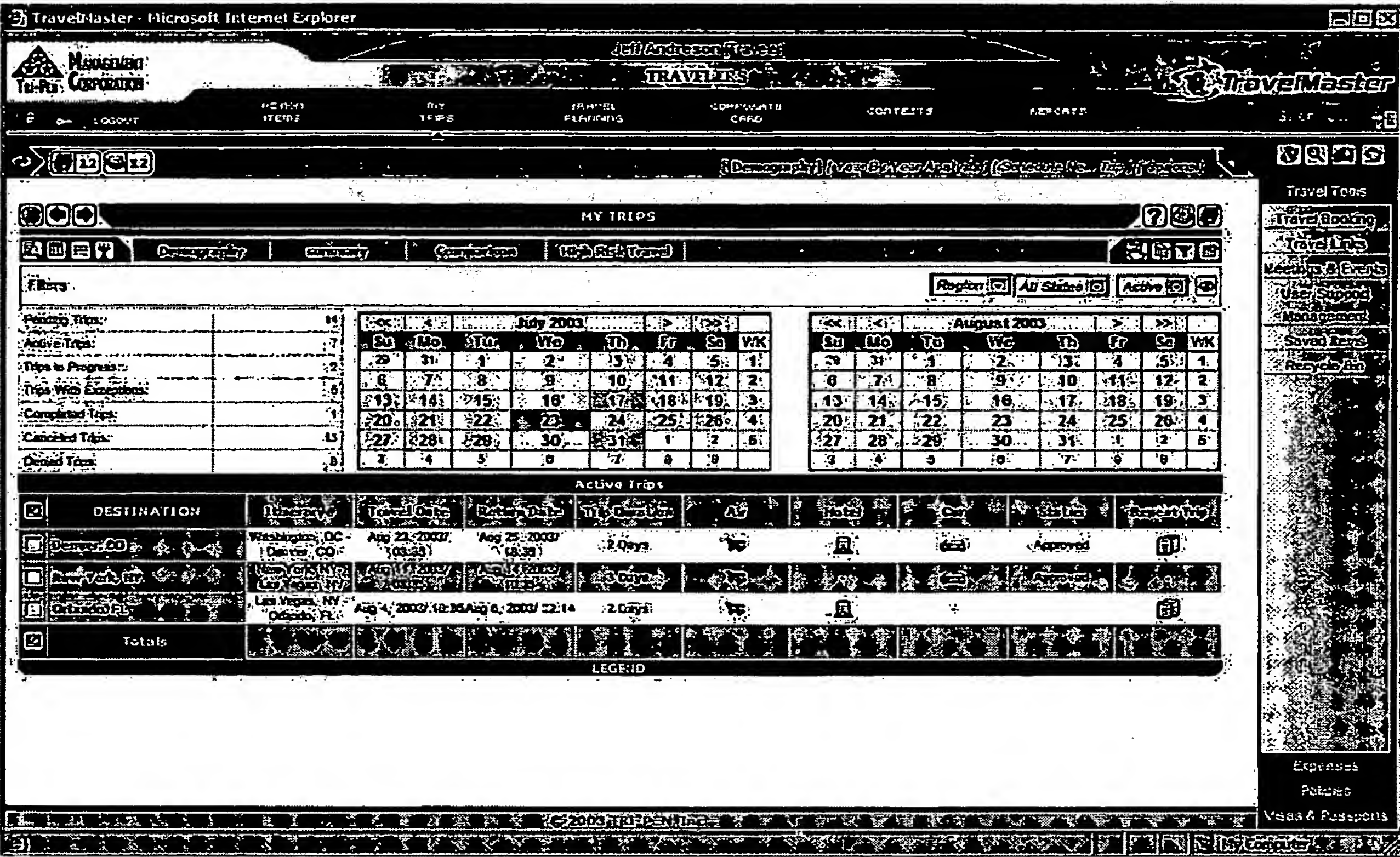


FIGURE 28

TravelCommander™

File Edit View Format Help

Victoria Woodford - Online

Messenger Travel Counselors Contact List

Tri-Pen Management Corporation

Name	Phone	Location	Title
▼ My Contacts - 4/12			
John Smith	(509) 555-1212	Orlando USA	Marketing
Ashton R. Adams	(509) 555-1212	Denver USA	GTO
Tim Whitaker	(509) 555-1212	London UK	Sales
Christian Johansson	(509) 555-1212	London UK	Agent
Doyal Bryant	(509) 555-1212	London UK	Agent
▶ My Agents - 9/22			
▶ Travel Policy // Approvals // Booking // Management - 9/22			
▶ Security Policy // Health // Safety - 9/22			
▶ Corporate Card Policy // Management - 9/22			
▶ Program & Project Management // Budget Estimating - 12/34			
▶ Administrative Staff // Travel Assistants - 10/31			
▶ Visa & Passports - 7/21			
▶ Travel Suppliers // Support - 2/10			
▶ Expense Reporting - 4/9			
▶ RFP Management - 9/13			

Travel Policy Exceptions

System Notice

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